

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Municipal permit. The discharge results from the operation of a 0.0047 MGD wastewater treatment plant. This permit action consists of updating the WQS and updating boilerplate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

1. Facility Name and Mailing Address: Unionville Elementary School
Wastewater Treatment Plant
200 Dailey Drive
Orange, VA 22960

Facility Location: 10285 Zachary Taylor Highway
Unionville, VA 22567

Facility Contact Name: Mr. Larry A. Massie,
Superintendent
Telephone Number: 540-661-4550
2. Permit No.: VA0060330

Expiration Date of previous permit: June 24, 2009

Other VPDES Permits associated with this facility: None

Other Permits associated with this facility: None

E2/E3/E4 Status: N/A
3. Owner Name: Orange County School Board

Owner Contact/Title: Mr. Larry A. Massie,
Superintendent
Telephone Number: 540-661-4550
4. Application Complete Date: January 30, 2009

Permit Drafted By: Joan C. Crowther
Date Drafted: June 24, 2009

Draft Permit Reviewed By: Alison Thompson
Date Reviewed: June 25, 2009

Public Comment Period : Start Date: End Date:
5. Receiving Waters Information: See Attachment 1 for the Flow Frequency Determination

Receiving Stream Name : Riga Run, UT

Drainage Area at Outfall: 0.234 sq.mi. River Mile: 0.83

Stream Basin: York River Subbasin: N/A

Section: 3 Stream Class: III

Special Standards: None Waterbody ID: VAN-F07, Y017

7Q10 Low Flow: 0.0 MGD 7Q10 High Flow: 0.0 MGD

1Q10 Low Flow: 0.0 MGD 1Q10 High Flow: 0.0 MGD

Harmonic Mean Flow: 0.0 MGD 30Q5 Flow: 0.0 MGD

303(d) Listed: No 30Q10 Flow: 0.0 MGD

TMDL Approved: Yes Date TMDL Approved: *E. coli* - EPA 11/4/05
PCB Fish Tissue due by 2018
6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

| | |
|---|--|
| <u>✓</u> State Water Control Law <u>✓</u> Clean Water Act <u>✓</u> VPDES Permit Regulation <u>✓</u> EPA NPDES Regulation | <u>✓</u> EPA Guidelines <u>✓</u> Water Quality Standards <u> </u> Other |
|---|--|

7. Licensed Operator Requirements: Class IV

8. Reliability Class: Class II

9. Permit Characterization:

| | | |
|--|---|---|
| <input type="checkbox"/> Private | <input type="checkbox"/> Effluent Limited | <input type="checkbox"/> Possible Interstate Effect |
| <input type="checkbox"/> Federal | <input checked="" type="checkbox"/> Water Quality Limited | <input type="checkbox"/> Compliance Schedule Required |
| <input type="checkbox"/> State | <input type="checkbox"/> Toxics Monitoring Program Required | <input type="checkbox"/> Interim Limits in Permit |
| <input checked="" type="checkbox"/> POTW | <input type="checkbox"/> Pretreatment Program Required | <input type="checkbox"/> Interim Limits in Other Document |
| <input checked="" type="checkbox"/> TMDL | | |

10. Wastewater Sources and Treatment Description:

The wastewater treatment plant consists of a grease trap, 1- 6,000 septic tanks, a bar screen, a 2,000 gallon extended aeration basin, secondary clarifier, tablet chlorination, tablet dechlorination, and diffuse post aeration.

See Attachment 2 for a facility schematic/diagram.

| TABLE 1 – Outfall Description | | | | |
|---|---------------------|--------------------|-------------|-------------------------------------|
| Outfall Number | Discharge Sources | Treatment | Design Flow | Outfall Latitude and Longitude |
| 001 | Domestic Wastewater | See Item 10 above. | 0.0047 MGD | 38° 15' 43.78" N 77° 57' 5.18" W |
| See Attachment 3 for USGS Topographic Map: Unionville (DEQ #184C) | | | | |

11. Sludge Treatment and Disposal Methods:

The aerobic digested sludge is pumped and hauled by an independent contractor to the Massaponax Wastewater Treatment Plant (VA0025658) in Spotsylvania County, Virginia for disposal.

12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge

| TABLE 2 | |
|-----------------------|--|
| Identification Number | Description of discharges, DEQ Ambient Water Quality Monitoring in the Vicinity of the Unionville Elementary School's Discharge |
| VA0062961 | Lightfoot Elementary School – Discharges into an unnamed tributary to Riga Run (38° 14' 51" / 77° 57' 12") |
| 8-RIG004.52 | Riga Run - DEQ Ambient Water Quality Monitoring at Route 650 Bridge (38° 14' 24" / 77° 56' 23") Samples collected in 1999-2000 and 2006. |

13. Material Storage:

| TABLE 3 - Material Storage | | |
|----------------------------|----------------------|---|
| Materials Description | Volume Stored | Spill/Stormwater Prevention Measures |
| Chlorine Tablets | 2 – 5 gallon buckets | Stored in covered container in locked storage building |
| Dechlorination Tablets | 2 – 5 gallon buckets | Stored in covered container in locked storage building. |

14. Site Inspection: Performed by Terry Nelson, DEQ Water Inspector on April 14, 2009. (See Attachment 4).

15. Receiving Stream Water Quality and Water Quality Standards:a) Ambient Water Quality Data

There is no monitoring data for the receiving stream (Unnamed Tributary to Riga Run). The nearest downstream monitoring station is DEQ ambient water quality monitoring station 8-RIG004.52, located on Riga Run at the Route 650 bridge crossing. This station is located approximately 1.81 rivermiles downstream from the Outfall of VA0060330. The following information regarding Riga Run was taken from the 2008 Integrated Assessment:

Note:

No data exist for the 2008 assessment period. Evaluation of the segment from the previous assessment will be carried forward, including overall category and assessment documentation. According to Rule 8 of the 2008 Assessment Guidance Manual (07-2010), "fully supporting waters can only be carried forward as fully supporting for two additional reporting cycles with no new data." 2008 is the first assessment the segment is carried forward.

The information from the 2006 assessment is as follows:

DEQ ambient monitoring station 8-RIG004.52, at Route 650.

Historical Note:

DEQ station 8-RIG004.52 was added as a special study based on the 1998 303(d) listing of Terrys Run.

The aquatic life and wildlife uses are considered fully supporting. Since there is one fecal coliform bacteria exceedance in eight sampling events, the data are insufficient to determine support for the recreation use. The fish consumption use was not assessed.

Please see Attachment 5 for Planning Statement dated June 4, 2009.

b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260 (360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, unnamed tributary to Riga Run, is located within Section 3 of the York River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 6 details other water quality criteria applicable to the receiving stream.

Ammonia:

Staff has re-evaluated the receiving stream ambient monitoring data for pH and temperature (Attachment 8) and the effluent data for pH and finds no significant differences from the data used to establish ammonia criteria and subsequent effluent limits calculated in the 2004 permit reissuance. However, the 2004 ammonia effluent limitations were not incorporated into the 2004 permit reissuance. This was because during the 1999 permit reissuance new information was obtained that was not previously noted that indicated the discharge was intermittent; therefore, only the acute ammonia criteria should be used for to determine the ammonia effluent limitation. At that time, based on the 1999 Water Quality Standards (acute criteria only) the ammonia effluent limitation was determined to be 6.6 mg/L. A re-evaluation in 2004 of the ammonia criteria using the 2003 Water Quality Standards determined that the ammonia effluent limitation should be 10.13 mg/L. During this (2009) permit reissuance, the ammonia effluent limitations re-evaluation concurred with the 2004 re-evaluation by determining that a 10.13 mg/L ammonia effluent limitation would maintain water quality standards in the receiving stream. However, because the facility's effluent quality has been able to comply with the stricter ammonia effluent limitation established in the 1999 permit reissuance, the ammonia effluent limitation will remain at 6.6 mg/L for this permit reissuance. See Attachment 7 for the ammonia calculations.

Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/l calcium carbonate). The average hardness of the receiving stream is 20 mg/L. This hardness value is based on stream data collected at the 8-RIG004.52 (Route 650) DEQ ambient water quality monitoring station between 1999 and 2000. See Attachment 8 for the hardness data. The temperature (21°C) and pH (7.1 S.U.) effluent data used in determining the water quality criteria were carried forward from the 2004 permit reissuance. There is no hardness data for this facility. Staff guidance suggests using a default hardness value of 50 mg/l CaCO₃ for streams east of the Blue Ridge. The hardness-dependent metals criteria shown in Attachment 6 are based on this value.

Bacteria Criteria:

The Virginia Water Quality Standards (9 VAC 25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

- 1) *E. coli* bacteria per 100 ml of water shall not exceed the following:

| Freshwater <i>E. coli</i> (N/100 ml) | Geometric Mean ¹ | Single Sample Maximum |
|--------------------------------------|-----------------------------|-----------------------|
| | 126 | 235 |

¹For two or more samples [taken during any calendar month].

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, unnamed tributary to Riga Run, is located within Section 3 of the York River Basin. There are no special standards for this stream section.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched on June 3, 2009 for records to determine if there are threatened or endangered species in the vicinity of the discharge. No threatened or endangered species were identified. See Attachment 9 for the database documentation.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on the receiving stream being a dry ditch. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:

Effluent data obtained from the permit application and DMRs has been reviewed and determined to be suitable for evaluation. Effluent data were reviewed; and, there were only three exceedances of the effluent limitations between December 2003 and April 2009. Ammonia monthly average and weekly maximum effluent limitations were violated in February 2004 (18.5 mg/L). The Total Residual Chlorine contact was violated in January 2008 (0.9 mg/L). See Attachment 10.

The following pollutants require a wasteload allocation analysis: Total Residual Chlorine, Ammonia as N.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

| | | | |
|--------|----------------|---|---|
| Where: | WLA | = | Wasteload allocation |
| | C _o | = | In-stream water quality criteria |
| | Q _e | = | Design flow |
| | Q _s | = | Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for chronic ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria) |
| | f | = | Decimal fraction of critical flow |
| | C _s | = | Mean background concentration of parameter in the receiving stream. |

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C_o .

c) Effluent Limitations Toxic Pollutants, Outfall 001 –

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N:

Staff evaluated the new ambient water quality data for the receiving stream and has concluded that is not significantly different than what was used to derive the 2004 ammonia limits (Attachment 7). However, due to the facility's demonstration that it can comply with the 1999 ammonia effluent limitations (6.6 mg/L) which are more stringent than those determined in the 2004 and 2009 ammonia effluent limitation evaluations (10.13 mg/L and 10.1 mg/L, respectively), the 1999 ammonia effluent limitations are proposed to continue in this permit reissuance.

2) Total Residual Chlorine:

Chlorine is used for disinfection and is potentially in the discharge. Staff calculated WLAs for TRC using current critical flows and the mixing allowance. In accordance with current DEQ guidance, staff used a default data point of 0.2 mg/L and the calculated WLAs to derive limits. A monthly average of 0.008 mg/L and a weekly average limit of 0.010 mg/L are proposed for this discharge (see Attachment 11).

3) Metals/Organics:

No data was available to review; therefore, no limits are needed.

d) Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

No changes to dissolved oxygen (D.O.), biochemical oxygen demand-5 day (BOD₅), total suspended solids (TSS), and pH limitations are proposed.

Dissolved Oxygen and BOD₅ were based on a stream model. Since the receiving stream is intermittent and the 7Q10 flow is zero, the stream model was run to maintain a D.O. of 5 mg/L. The stream model shows that once the unnamed tributary meets the next unnamed tributary approximately 0.83 river miles downstream, a D. O. of at least 5 mg/L is maintain until the stream flow reaches Riga Run with an effluent limit of 24 mg/L for BOD₅ and a D.O. of 6 mg/L. See Attachment 12 for the Stream model.

It is staff's practice to equate the Total Suspended Solids limits with the BOD₅ limits. TSS limits are established to equal BOD₅ limits since the two pollutants are closely related in terms of treatment of domestic sewage.

pH limitations are set at the water quality criteria.

E. coli limitations are in accordance with the Water Quality Standards 9 VAC25-260-170.

e) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for Flow, BOD₅, Total Suspended Solids, Ammonia, pH, Dissolved Oxygen, and Total Residual Chlorine.

The limit for Total Suspended Solids is based on Best Professional Judgement.

The mass loading (kg/d) for monthly and weekly averages were calculated by multiplying the concentration values (mg/l), with the flow values (in MGD) and a conversion factor of 3.785.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

18. Antibacksliding:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

19. Effluent Limitations/Monitoring Requirements:

Design flow is 0.0047 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

Outfall No. 001 has been designated as effluent obtained after the post dechlorination unit.

| PARAMETER | BASIS FOR LIMITS | DISCHARGE LIMITATIONS | | | | | | MONITORING REQUIREMENTS | |
|---|------------------------|------------------------|-------------|-----------------------|-------------|----------------|----------------|----------------------------|--------------------|
| | | <u>Monthly Average</u> | | <u>Weekly Average</u> | | <u>Minimum</u> | <u>Maximum</u> | <u>Frequency</u> | <u>Sample Type</u> |
| Flow (MGD) | | NL | | N/A | | N/A | NL | 1/D | Estimated |
| pH | 2 | N/A | | N/A | | 6.0 S.U. | 9.0 S.U. | 1/D | Grab |
| BOD ₅ | 4 | 24 mg/L | 0.40 kg/day | 36 mg/L | 0.60 kg/day | N/A | N/A | 1/M | Grab |
| Total Suspended Solids (TSS) | 1 | 24 mg/L | 0.40 kg/day | 36 mg/L | 0.60 kg/day | N/A | N/A | 1/M | Grab |
| DO | 4, 2 | N/A | | N/A | | 6.0 mg/L | N/A | 1/D | Grab |
| Ammonia, as N (mg/L) | 2 | 6.6 mg/L | | 6.6 mg/L | | N/A | N/A | 1/M | Grab |
| <i>E. coli</i> (Geometric Mean) | 2 | 126 n/100mls | | N/A | | N/A | N/A | 2/M | Grab |
| Total Residual Chlorine (after contact tank) | 2, 3 | N/A | | N/A | | 1.0 mg/L | N/A | 1/D | Grab |
| Total Residual Chlorine (after dechlorination) | 2 | 0.008 mg/L | | 0.010 mg/L | | N/A | N/A | 1/D | Grab |

The basis for the limitations codes are:

1. Best Professional Judgment
2. Water Quality Standards
3. DEQ Disinfection Guidance
4. Stream model (undated)

MGD = Million gallons per day.

N/A = Not applicable.

NL = No limit; monitor and report.

S.U. = Standard units.

1/D = Once every day.

1/M = Once every month.

2/M = Two per month at least 7 days apart.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

20. Other Permit Requirements :a) Part I.B. of the permit contains additional chlorine monitoring requirements, quantification levels and compliance reporting instructions.

A minimum chlorine residual must be maintained at the exit of the chlorine contact tank to assure adequate disinfection. No more than 10% of the monthly test results for TRC at the exit of the chlorine contact tank shall be <1.0 mg/L with any TRC <0.6 mg/L considered a system failure. Monitoring at numerous STPs has concluded that a TRC residual of 1.0 mg/L is an adequate indicator of compliance with the *E. coli* criteria. *E. coli* limits are defined in this section as well as monitoring requirements to take effect should an alternate means of disinfection be used.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions:

- a) 95% Capacity Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.B.2. requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. This facility is a POTW.
- b) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. Within 90 days of the effective date of this permit, the permittee shall submit for approval an Operation and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- c) Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq. and the VPDES Permit Regulation at 9 VAC 25-31-200 C, and Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators. This facility requires a Class IV operator.
- d) Reliability Class. The Sewage Collection and Treatment Regulations at 9 VAC 25-790 require sewage treatment works to achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. Reliability means a measure of the ability of the treatment works to perform its designated function without failure or interruption of service. The facility is required to meet a reliability Class of II
- e) CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.
- f) Treatment Works Closure Plan. The State Water Control Law §62.1-44.15:1.1, makes it illegal for an owner to cease operation and fail to implement a closure plan when failure to implement the plan would result in harm to human health or the environment. This condition is used to notify the owner of the need for a closure plan where a facility is being replaced or is expected to close.
- g) Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.
- h) Sludge Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.C.4. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA. The facility includes a sewage treatment works.
- i) Sludge Use and Disposal. The VPDES Permit Regulation at 9 VAC 25-31-100.P., 220.B.2., and 420-720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

a) Special Conditions:

1) The “Indirect Dischargers” special condition was deleted from this permit reissuance because this wastewater treatment plant serves only the elementary school so all wastewater sources are already under the control of the Orange County School Board.

b) Monitoring and Effluent Limitations:

1) The additional bacterial effluent limitations and monitoring requirement as specified in Part I. B.2 of the 2004 permit reissuance has been deleted from the 2009 permit reissuance. This special condition was incorporated into the 2004 permit reissuance to ensure that the chlorination and dechlorination units were operating efficiently so that the *E. coli* water quality standard was being maintained. By letter dated September 16, 2005, DEQ acknowledged that the *E. coli* testing had been successfully completed and no further *E. coli* sampling was necessary.

2) Due to the downstream *E. coli* bacteria impairment (Terrys Run), an *E. coli* effluent limitation of 126 n/100 mls at a sampling frequency of twice per month (at least seven days apart) was added to the permit’s effluent page, Part I.A.1. While the unnamed tributary was not specifically included in the Terrys Run Bacteria TMDL, all upstream point source discharges were included. The unnamed tributary will not be included in the Lake Anna PCB TMDL. Bacteria TMDL – WLA for Unionville Elementary School VPDES Permit No. VA0060330 is 8.21E+09 CFU of *E. coli* per year which equates to 126 n/100 mLs. (See Item 26 of the Fact Sheet for more information.)

24. Variances/Alternate Limits or Conditions:

There are no variances, alternate limits, or conditions associated with this permit reissuance.

25. Public Notice Information:

First Public Notice Date:

Second Public Notice Date:

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3925, joan.crowther@deq.virginia.gov. See Attachment 13 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

26. 303 (d) Listed Stream Segments and Total Maximum Daily Loads (TMDL):

TMDL Reopener: This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

The unnamed tributary flows into Riga Run, which flows into Terrys Run, which in turn flows into Lake Anna. A segment of Terrys Run (VAN-F07R_TRY01A00), beginning at the confluence with Riga Run and continuing

downstream to the confluence with Lake Anna, is listed as not supporting the (1) fish consumption use due to PCBs in fish tissue and (2) recreation use due to *E. coli*.

1. Fish Consumption Use Impairment: The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 6/15/04 and modified 12/13/04 and 08/31/07, limits consumption of bluegill sunfish, carp, channel catfish, largemouth bass, striped bass, white catfish, and white perch to no more than two meals per month. The advisory also bans the consumption of gizzard shad. The affected area includes the entirety of Lake Anna and its tributaries Contrary Creek, Gold Mine Creek, and Terrys Run.

2. Recreation Use Impairment: Sufficient excursions from the instantaneous *E. coli* bacteria criterion (8 of 19 samples - 42.1%) were recorded at DEQ's ambient water quality monitoring station (8-TRY004.98) at the Route 629 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 1998 through 2004. The *E. coli* bacteria impairment was first listed in 2006.

Several segments of Lake Anna downstream of Terrys Run are listed as not supporting the fish consumption use due to PCBs in fish tissue. The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 6/15/04 and modified 12/13/04 and 08/31/07, limits consumption of bluegill sunfish, carp, channel catfish, largemouth bass, striped bass, white catfish, and white perch to no more than two meals per month. The advisory also bans the consumption of gizzard shad. The affected area includes the entirety of Lake Anna and its tributaries Contrary Creek, Gold Mine Creek, and Terrys Run. The impaired segments listed are:

1. Terrys Run/Lake Anna (VAN-F07L_TRY01A04) – segment includes the Terrys Run arm of Lake Anna. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from four species (bluegill sunfish, carp, largemouth bass, white catfish) of fish sampled in 2003 and in tissue from five species (bluegill sunfish, carp, channel catfish, gizzard shad, white perch) of fish sampled in 2006 (7 total excursions) at monitoring station 8-TRY001.33.
2. Lake Anna/Pamunkey Creek (VAN-F07L_PMC01A04) - segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until the confluence with the North Anna River at The Splits. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from two species of fish (channel catfish, striped bass) sampled in 2006 (four total excursions) at monitoring station 8-PMC002.13.
3. Lake Anna (VAN-F07L_NAR03A02) - segment includes the upper portion North Anna River portion of Lake Anna, beginning at the boundary of F07, and continues downstream until the Route 208 bridge.
4. Lake Anna (VAN-F07L_NAR02A02) - segment includes the middle portion of Lake Anna, beginning at the Route 208 bridge, and continues downstream until the northern end of the Route 690 bridge. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from one specie of fish (channel catfish) sampled in 2006 (three total excursions) at monitoring station 8-NAR044.68.
5. Lake Anna (VAN-F07L_NAR01A02) - segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from three species of fish (carp, channel catfish, largemouth bass) sampled in 2003 (four total excursions) and in tissue from one specie of fish (carp) sampled in 2006 at monitoring station 8-NAR034.92.

TMDL Status:

Terrys Run (VAN-F07R_TRY01A00) Recreation Use Impairment: A bacteria TMDL for the Terrys Run watershed was developed and approved by the U.S. EPA on November 4, 2005. The SWCB approved the TMDL on September 27, 2006. The sources of bacteria requiring reductions are pet, livestock and wildlife waste delivered directly to the stream or via pastureland or forest, human contributions from straight pipes, failing septic systems, and leaking sanitary sewers, and biosolid application.

The PCB TMDL for Terrys Run and all the segments in Lake Anna has not yet been completed. The PCB TMDL for Terrys Run/Lake Anna segments (except for segment VAN-F07L_NAR01A02) are scheduled for due by 2018. Segment VAN-F07L_NAR01A02 is scheduled to be completed by 2014. Given the TMDL process, all of the Terrys Run/Lake Anna PCB impaired segments are expected to be completed by 2014.

Special Permit considerations: None

27. Additional Comments:

Previous Board Action(s): None.

Staff Comments: The permit reissuance was delayed due to staff workload.

Public Comment:

EPA Checklist: The checklist can be found in Attachment 14.

Unionville Elementary School Wastewater Treatment Plant
Fact Sheet Attachments

| Attachment | Description |
|------------|--|
| 1 | Flow Frequency Memo dated November 3, 1998 |
| 2 | Facility Diagram |
| 3 | USGS Topographic Map – Unionville, DEQ # 184C |
| 4 | Site Inspection Report dated April 14, 2009 by Terry Nelson, DEQ-NRO Water Inspector |
| 5 | Planning Statement for Unionville Elementary School, dated June 4, 2009 |
| 6 | Freshwater Water Quality Criteria/ Wasteload Allocated Analysis dated June 23, 2009 |
| 7 | Ammonia Calculations for 1999, 2004 and 2009 |
| 8 | Hardness, Temperature and pH – Riga Run Stream Data |
| 9 | DGIF Threatened and Endangered Species Database Search dated June 3, 2009 |
| 10 | Effluent DMR data – December 03- April 09 |
| 11 | Total Chlorine Residual Calculation dated June 23, 2009 |
| 12 | Stream model (DO & BOD ₅) |
| 13 | Public Notice |
| 14 | EPA Checklist dated June 23, 2009 |

MEMORANDUM

Attachment 1

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
Water Quality Assessments and Planning
629 E. Main Street P.O. Box 10009 Richmond, Virginia 23240

SUBJECT: Flow Frequency Determination
Unionville Elementary School STP - #VA0060330

TO: James Olson, NRO

FROM: Paul E. Herman, P.E., WQAP

DATE: November 3, 1998

COPIES: Ron Gregory, Charles Martin, File

This memo supercedes my November 19, 1993 memo to Joan Crowther concerning the subject VPDES permit.

The Unionville Elementary School STP discharges to an unnamed tributary of the Riga Run near Unionville, VA. Stream flow frequencies are required at this site by the permit writer for the purpose of calculating effluent limitations for the VPDES permit.

The values at the discharge point were determined by inspection of the USGS Unionville Quadrangle topographical map which shows the receiving stream as intermittent at the discharge point. The flow frequencies for intermittent streams are 0.0 cfs for the 1Q10, 7Q10, 30Q5, high flow 1Q10, high flow 7Q10, and the harmonic mean. For modeling purposes, flow frequencies have been determined for the first perennial reach downstream of the discharge point.

The USGS conducted several flow measurements on the Terrys Run from 1989 to 1992. The measurements were made at the Route 629 bridge near Tatum, VA. The measurements made by the USGS correlated very well with the same day daily mean values from the continuous record gage on the North Fork Rivanna River near Proffit, VA #02032680. The measurements and daily mean values were plotted on a logarithmic graph and a best fit line was drawn through the data points. The required flow frequencies from the reference gage were plotted on the regression line and the associated flow frequencies at the measurement site were determined from the graph.

The flow frequencies at the perennial point were determined by using the values at the measurement site and adjusting them by proportional drainage areas. The data for the reference gage, the measurement site and the perennial point are presented below:

N.F. Rivanna River near Proffit, VA (#02032680):

| | | |
|-------------------------------------|-------------------------|--|
| Drainage Area = 176 mi ² | | |
| 1Q10 = 6.6 cfs | High Flow 1Q10 = 24 cfs | |
| 7Q10 = 8.3 cfs | High Flow 7Q10 = 29 cfs | |
| 30Q5 = 17 cfs | HM = 66 cfs | |

Terrys Run at Route 629 near Tatum, VA (#01670230):

| | | |
|--------------------------------------|---------------------------|--|
| Drainage Area = 26.9 mi ² | | |
| 1Q10 = 0.06 cfs | High Flow 1Q10 = 0.57 cfs | |
| 7Q10 = 0.09 cfs | High Flow 7Q10 = 0.80 cfs | |
| 30Q5 = 0.31 cfs | HM = 3.2 cfs | |

UT to Riga Run at perennial point:

| | | |
|--------------------------------------|----------------------------|--|
| Drainage Area = 0.33 mi ² | | |
| 1Q10 = 0.0 cfs | High Flow 1Q10 = 0.007 cfs | |
| 7Q10 = 0.001 cfs | High Flow 7Q10 = 0.010 cfs | |
| 30Q5 = 0.004 cfs | HM = 0.039 cfs | |

The high flow months are December through June.

This analysis assumes there are no significant discharges, withdrawals or springs influencing the flow in the unnamed tributary upstream of the perennial point.

If there are any questions concerning this analysis, please let me know.

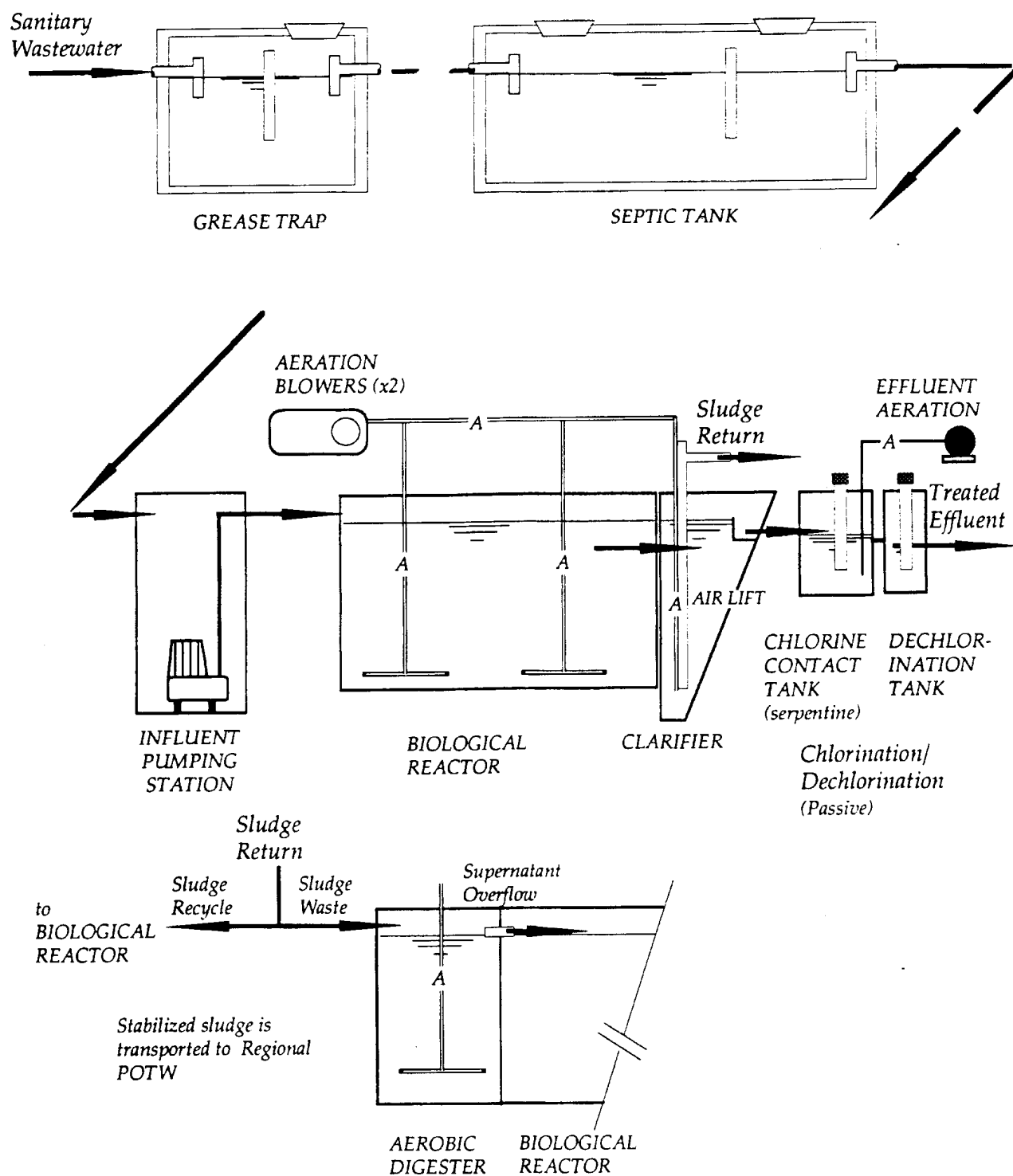


Figure 3 - 5
Wastewater Treatment Process Schematic
Unionville Elementary School

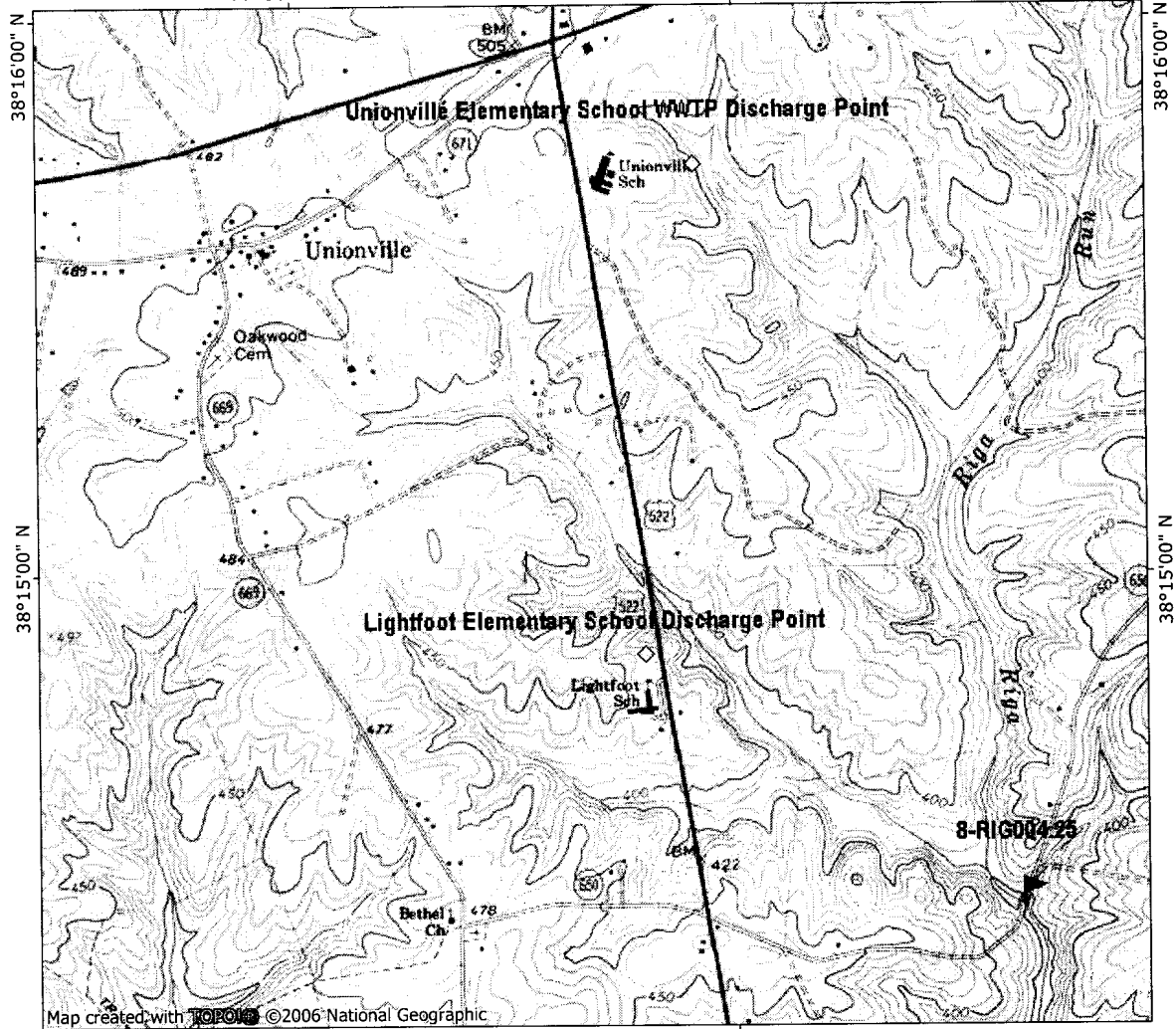
Revision 1.0

September, 2000

Unionville Elementary School WWTP - Unionville / Lahore USGS TOPO 05/28/09

77°58'00" W

WGS84 77°57'00" W



Map created with TOPO! ©2006 National Geographic

77°58'00" W

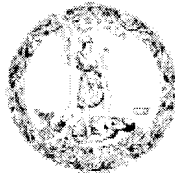
WGS84 77°57'00" W



**NATIONAL
GEOGRAPHIC**

0.0 0.5 miles
0.0 0.5 1.0 km

MN * TN
10°
05/28/09



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

April 29, 2009

Mr. Larry Massie
Acting Superintendent
Orange County Public Schools
437 Waugh Boulevard
Orange, VA 22960

Re: Unionville Elementary School STP Inspection – VA0060330

Dear Mr. Massie:

Attached is a copy of the site inspection report generated while conducting a Facility Technical Inspection at the Unionville Elementary School - Sewage Treatment Plant (STP) on April 14, 2009. The compliance staff would like to thank Mr. Tim Jenkins for his time and assistance during the inspection.

If you have any questions or comments concerning this report, please feel free to contact me at the Northern Regional Office at (703) 583-3833 or by E-mail at twnelson@deq.virginia.gov.

Sincerely,

A handwritten signature in cursive script that reads "Terry Nelson".

Terry Nelson
Environmental Specialist II

cc: Permit/DMR File
OWCP - SGStell
Electronic Copy: Compliance Manager; Compliance Auditor
Electronic Copy: Mr. Tim Jenkins – Dabney & Crooks

**DEQ
WASTEWATER FACILITY INSPECTION REPORT
PREFACE**

| | | | |
|-------------------------------------|--|-----------------------|-------------------|
| VPDES/State Certification No. | (RE) Issuance Date | Amendment Date | Expiration Date |
| VA0060330 | 06/24/2004 | | 06/24/2009 |
| Facility Name | Address | Telephone Number | |
| Unionville Elementary School | 10285 Zachary Taylor Highway Unionville, VA 22567 | (540) 661-4540 | |
| Owner Name | Address | Telephone Number | |
| Orange County Public Schools | 437 Waugh Boulevard Orange, VA 22960 | (540) 661-4550 | |
| Responsible Official | Title | Telephone Number | |
| Mr. Larry Massie | Acting Superintendent | (540) 661-4550 | |
| Responsible Operator | Operator Cert. Class/number | Telephone Number | |
| Douglas Crooks | Class I / 1909000367 | (540) 373-0380 | |

TYPE OF FACILITY:

| DOMESTIC | | | | INDUSTRIAL | | | |
|-------------|----------|-------|----------|------------|--|-----------|--|
| Federal | | Major | | Major | | Primary | |
| Non-federal | X | Minor | X | Minor | | Secondary | |

INFLUENT CHARACTERISTICS:

DESIGN:

| | | | |
|--|--------------------|----------------------|--|
| | Flow | 4,700 gal/day | |
| | Population Served | Variable | |
| | Connections Served | One school | |
| | BOD ₅ | No data | |
| | TSS | No data | |

EFFLUENT LIMITS: Units in mg/L unless otherwise specified.

| Parameter | Min. | Avg. | Max. | Parameter | Min. | Avg. | Max. |
|-----------------------|------------|---------------|------------|-------------------------|------------|--------------|--------------|
| Flow (MGD) | | 0.0047 | NL | BOD₅ | | 24 | 36 |
| pH (S.U.) | 6.0 | | 9.0 | Total Contact Cl | 1.0 | | |
| TSS | | 24 | 36 | Inst Tech Min Cl | 0.6 | | |
| DO | 6.0 | | | Inst Res Max Cl | | 0.008 | 0.010 |
| NH₃ | | 6.6 | 6.6 | | | | |

| | | | |
|--|------------------------|---------------------------|--|
| | Receiving Stream | UT to Riga Run | |
| | Basin | Rappahannock River | |
| | Discharge Point (LAT) | 38° 15 38" N | |
| | Discharge Point (LONG) | 77° 57' 00" W | |

Virginia Department of Environmental Quality
Northern Regional Office

FOCUSED CEI TECH/LAB INSPECTION REPORT

| | | | |
|---|---|--|--|
| FACILITY NAME: Unionville Elementary School | | INSPECTION DATE: April 14, 2009 | |
| | | INSPECTOR: Terry Nelson | |
| PERMIT No.: VA0060330 | | REPORT DATE: April 23, 2009 | |
| TYPE OF FACILITY: | <input checked="" type="checkbox"/> Municipal <input type="checkbox"/> Major | TIME OF INSPECTION: Arrival 0930 Departure 1000 | |
| | <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Minor | | |
| | <input type="checkbox"/> Federal <input type="checkbox"/> Small Minor | TOTAL TIME SPENT (including prep & travel) 4 hours | |
| | <input type="checkbox"/> HP <input type="checkbox"/> LP | | |
| PHOTOGRAPHS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | UNANNOUNCED INSPECTION? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| REVIEWED BY / Date: | | | |
| PRESENT DURING INSPECTION: Tim Jenkins, Dabney & Crooks | | | |

TECHNICAL INSPECTION

| | |
|---|---|
| 1. Has there been any new construction? (Last inspection April 2005) • If so, were plans and specifications approved? <u>Comments:</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. Is the Operations and Maintenance Manual approved and up-to-date? <u>Comments:</u> Outdated permit in Appendix, DEQ phone numbers are not consistent (703-583-3800 is recommended), outdated Chain of Custody for Patton, Harris, and Rust, some test methods listed are no longer approved | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. Are the Permit and/or Operation and Maintenance Manual specified licensed operator being met? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 4. Are the Permit and/or Operation and Maintenance Manual specified operator staffing requirements being met? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Is there an established and adequate program for training personnel? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 6. Are preventive maintenance task schedules being met? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 7. Does the plant experience any organic or hydraulic overloading? <u>Comments:</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 8. Have there been any bypassing or overflows since the last inspection? <u>Comments:</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 9. Is the standby generator (including power transfer switch) operational and exercised regularly? <u>Comments:</u> Not applicable | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 10. Is the plant alarm system operational and tested regularly? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Virginia Department of Environmental Quality
Northern Regional Office

FOCUSED CEI TECH/LAB INSPECTION REPORT

| | | | |
|---|---|--|-------------------|
| FACILITY NAME: Unionville Elementary School | | INSPECTION DATE: April 14, 2009 | |
| | | INSPECTOR: Terry Nelson | |
| PERMIT No.: VA0060330 | | REPORT DATE: April 23, 2009 | |
| TYPE OF FACILITY: | <input checked="" type="checkbox"/> Municipal <input type="checkbox"/> Major | TIME OF INSPECTION: | |
| | <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Minor | Arrival 0930 | Departure 1000 |
| <input type="checkbox"/> Federal <input type="checkbox"/> Small Minor | TOTAL TIME SPENT (including prep & travel) | | |
| <input type="checkbox"/> HP <input type="checkbox"/> LP | 4 hours | | |
| PHOTOGRAPHS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | UNANNOUNCED INSPECTION? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| REVIEWED BY / Date: <i>EJ</i> 4/28/09 | | | |
| PRESENT DURING INSPECTION: Tim Jenkins, Dabney & Crooks | | | |

TECHNICAL INSPECTION

| | |
|---|---|
| 1. Has there been any new construction? (Last inspection April 2005) • If so, were plans and specifications approved? <u>Comments:</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. Is the Operations and Maintenance Manual approved and up-to-date? <u>Comments:</u> Outdated permit in Appendix, DEQ phone numbers are not consistent (703-583-3800 is recommended), outdated Chain of Custody for Patton, Harris, and Rust, some test methods listed are no longer approved | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. Are the Permit and/or Operation and Maintenance Manual specified licensed operator being met? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 4. Are the Permit and/or Operation and Maintenance Manual specified operator staffing requirements being met? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Is there an established and adequate program for training personnel? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 6. Are preventive maintenance task schedules being met? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 7. Does the plant experience any organic or hydraulic overloading? <u>Comments:</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 8. Have there been any bypassing or overflows since the last inspection? <u>Comments:</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 9. Is the standby generator (including power transfer switch) operational and exercised regularly? <u>Comments:</u> Not applicable | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 10. Is the plant alarm system operational and tested regularly? <u>Comments:</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

TECHNICAL INSPECTION

| | |
|---|---|
| 11. Is sludge disposed of in accordance with the approved sludge management plan? Comments: Wheeler Septic takes sludge to Massaponax WWTF | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 12. Is septage received? • If so, is septage loading controlled, and are appropriate records maintained? Comments: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 13. Are all plant records (operational logs, equipment maintenance, industrial waste contributors, sampling and testing) available for review and are records adequate? Comments: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 14. Which of the following records does the plant maintain? <div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Operational logs <input checked="" type="checkbox"/> Instrument maintenance & calibration </div> <div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Mechanical equipment maintenance <input type="checkbox"/> Industrial Waste Contribution (Municipal facilities) </div> Comments: | |
| 15. What does the operational log contain? <div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Visual observations <input checked="" type="checkbox"/> Flow Measurement <input checked="" type="checkbox"/> Laboratory results <input checked="" type="checkbox"/> Process adjustments </div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Control calculations <input type="checkbox"/> Other (specify) </div> Comments: | |
| 16. What do the mechanical equipment records contain? <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> As built plans and specs <input checked="" type="checkbox"/> Manufacturers instructions <input checked="" type="checkbox"/> Lubrication schedules </div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Spare parts inventory <input type="checkbox"/> Equipment/parts suppliers </div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Other (specify) </div> Comments: | |
| 17. What do the industrial waste contribution records contain (Municipal only)? <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Waste characteristics <input type="checkbox"/> Impact on plant <input type="checkbox"/> Locations and discharge types </div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Other (specify) </div> Comments: Not applicable | |
| 18. Which of the following records are kept at the plant and available to personnel? <div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Equipment maintenance records <input checked="" type="checkbox"/> Operational log <input type="checkbox"/> Industrial contributor records </div> <div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Instrumentation records <input checked="" type="checkbox"/> Sampling and testing records </div> Comments: | |
| 19. List records not normally available to plant personnel and their location: Comments: Major maintenance records stored at Orange County Schools superintendent office. | |
| 20. Are the records maintained for the required time period (three or five years)? Comments: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

UNIT PROCESS EVALUATION SUMMARY SHEET

| UNIT PROCESS | APPLICABLE | PROBLEMS* | COMMENTS |
|-----------------------------|------------|-----------|----------|
| Sewage Pumping | | | |
| Flow Measurement (Influent) | | | |
| Screening/Comminution | | | |
| Grit Removal | | | |
| Flow Equalization | X | | |
| Primary Sedimentation | | | |
| Septic Tank and Sand Filter | X | | |
| Activated Sludge Aeration | X | | |
| Secondary Sedimentation | X | | |
| Flocculation | | | |
| Tertiary Sedimentation | | | |
| Filtration | | | |
| Chlorination | X | | |
| Dechlorination | X | | |
| Post Aeration | X | | |
| Flow Measurement (Effluent) | X | | |
| Plant Outfall | X | | |
| | | | |
| Sludge Pumping | | | |
| Aerobic Digestion | | | |
| | | | |
| | | | |

* Problem Codes

- | | |
|----------------------------------|--|
| 1. Unit Needs Attention | 4. Unapproved Modification or Temporary Repair |
| 2. Abnormal Influent/Effluent | 5. Evidence of Process Upset |
| 3. Evidence of Equipment Failure | 6. Other (explain in comments) |

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

- Operators are at the facility approximately 30 minutes per visit. The plant is not manned when school is not in session or no discharge is anticipated.
- Orange County schools were not in session during the inspection.
- A grease trap and septic tank precede the treatment system. Orange County Schools maintains the grease trap and septic tank. The septic tank was pumped out in July 2008.
- The secondary treatment system is a package plant that contains a sludge holding tank, aeration basins, and clarifier.
- The log book is stored in a waterproof cabinet. The log book included entries for minor maintenance performed on the system.
- Mr. Jenkins cycled all the blowers during the inspection. No problems were noted for the blowers.
- The aeration basin color was an unusual shade of brown that stabilized as the recycle pumps ran. Without school in session, negligible influent flow had been received since last Friday according to Mr. Jenkins.
- A slight scum layer had formed on the clarifier, but it quickly dispersed when the return sludge system cycled on.
- Thick weeds were observed growing around several of the plant structures. According to Mr. Jenkins, school staff performs the mowing and weed removal.
- Ground settling/subsidence was observed in several locations around the treatment plant.
- The chlorine contact tank is below ground and is covered by a shed. Mr. Jenkins unlocked the shed. Chemicals are stored in the shed and proper clean-up of spills is difficult due to limited space.
- Mr. Jenkins collects the chlorination sample at the inlet to the dechlorination unit.
- A tablet feeder is used for dechlorination.
- From here, the water flows downhill to the outfall.

Permit # VA0060330

EFFLUENT FIELD DATA:

| | | | | | | | | |
|--|----|------|------------------|----|------|----------------------|----|------|
| Flow | NA | MGD | Dissolved Oxygen | NA | mg/L | TRC (Contact Tank) | NA | mg/L |
| pH | NA | S.U. | Temperature | NA | °C | TRC (Final Effluent) | NA | mg/L |
| Was a Sampling Inspection conducted? <input checked="" type="checkbox"/> Yes (see Sampling Inspection Report) <input checked="" type="checkbox"/> No | | | | | | | | |

CONDITION OF OUTFALL AND EFFLUENT CHARACTERISTICS:

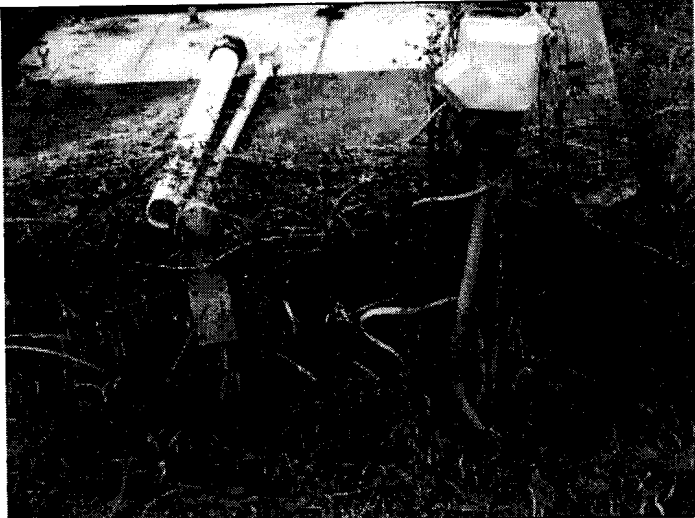
| | | | | | |
|---|---|---------------------------------------|--|------------------------------------|-----------------------------|
| 1. Type of outfall: | <input checked="" type="checkbox"/> Shore based | <input type="checkbox"/> Submerged | Diffuser? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Are the outfall and supporting structures in good condition? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | |
| 3. Final Effluent (evidence of following problems): | <input type="checkbox"/> Sludge bar | <input type="checkbox"/> Grease | | | |
| | <input type="checkbox"/> Turbid effluent | <input type="checkbox"/> Visible foam | <input type="checkbox"/> Unusual color | <input type="checkbox"/> Oil sheen | |
| 4. Is there a visible effluent plume in the receiving stream? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | |
| 5. Receiving stream: | <input type="checkbox"/> No observed problems <input type="checkbox"/> Indication of problems (explain below) | | | | |
| <u>Comments:</u> Outfall was not inspected as there was no effluent flow. | | | | | |

REQUIRED CORRECTIVE ACTIONS:

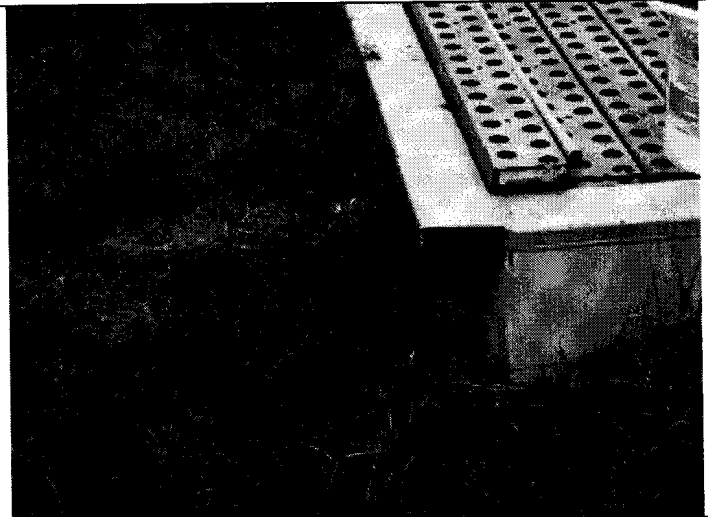
No required corrective actions.

NOTES and COMMENTS:

1. The facility appears to be well operated.
2. Orange County grounds keeping staff should properly trim the weeds and grass within the treatment plant area.
3. DEQ staff recommends grading or filling the areas where the ground had subsided.



1) Weeds at influent vault.



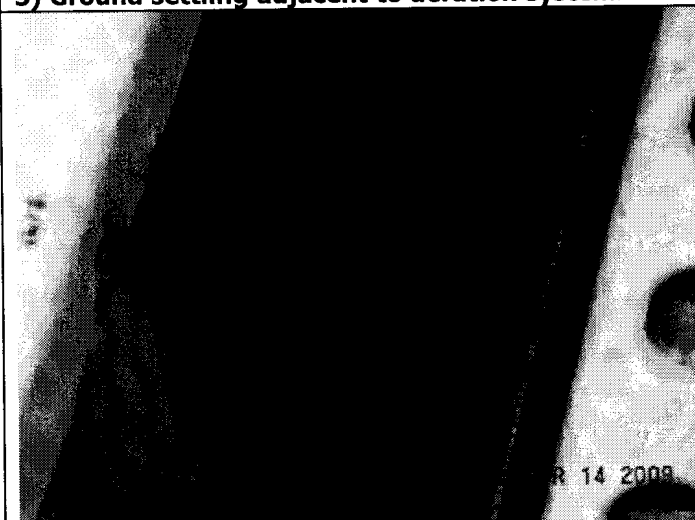
2) Weeds covering pipe into aeration system.



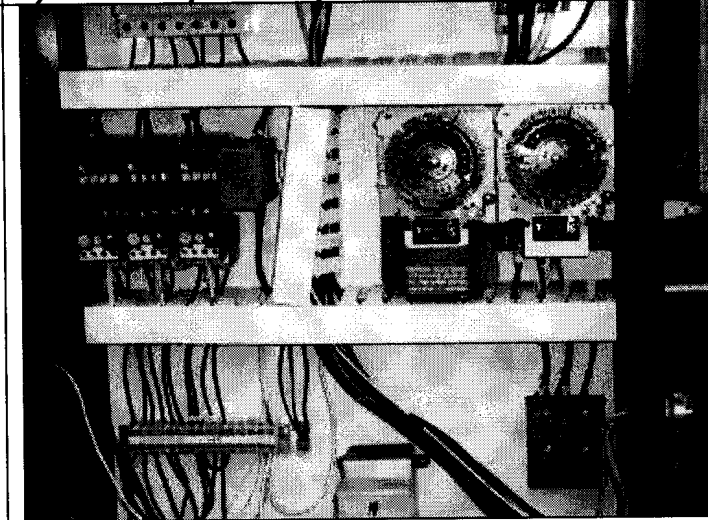
3) Ground settling adjacent to aeration system.



4) Aeration system recycle flow.



5) Scum layer on clarifier.



6) Blower control panel.

| | |
|------------------------------|------------------------|
| Unionville Elementary School | VPDES Permit VA0060330 |
| Photos by Terry Nelson | April 14, 2009 |
| Layout by Terry Nelson | Page 1 of 1 |

To: Joan C. Crowther
From: Katie Conaway

Date: Revised June 4, 2009
Subject: Planning Statement for VA0060330- Unionville Elementary School WWTP

Discharge Type: Municipal/Minor
Discharge Flow: 0.0047 MGD

Receiving Stream: Riga Run, UT
Latitude / Longitude: 38° 15' 43.78"/-77° 57' 5.18"
Waterbody ID: F07/YO17

1. Is there monitoring data for the receiving stream?

No.

- If yes, please attach latest summary.
- If no, where is the nearest downstream monitoring station.

There is no monitoring data for the receiving stream (Unnamed Tributary to Riga Run). The nearest downstream monitoring station is DEQ ambient water quality monitoring station 8-RIG004.52, located on Riga Run at the Route 650 bridge crossing. This station is located approximately 1.81 rivermiles downstream from the Outfall of VA0060330. The following information regarding Riga Run was taken from the 2008 Integrated Assessment:

Class III, Section 3.

Note: No data exist for the 2008 assessment period. Evaluation of the segment from the previous assessment will be carried forward, including overall category and assessment documentation. According to Rule 8 of the 2008 Assessment Guidance Manual (07-2010), "fully supporting waters can only be carried forward as fully supporting for two additional reporting cycles with no new data." 2008 is the first assessment the segment is carried forward.

*The information from the 2006 assessment is as follows:
DEQ ambient monitoring station 8-RIG004.52, at Route 650.*

Historical Note: DEQ station 8-RIG004.52 was added as a special study based on the 1998 303(d) listing of Terrys Run.

The aquatic life and wildlife uses are considered fully supporting. Since there is one fecal coliform bacteria exceedance in eight sampling events, the data are insufficient to determine support for the recreation use. The fish consumption use was not assessed.

2. Is the receiving stream on the current 303(d) list?

No, the unnamed tributary to Riga Run is not the current 303(d) list.

- If yes, what is the impairment?

N/A

- Has the TMDL been prepared?

N/A

- If yes, what is the WLA for the discharge?

N/A

- If no, what is the schedule for the TMDL?

N/A

3. If the answer to (2) above is no, is there a downstream 303(d) listed impairment?

Yes.

- If yes, what is the impairment?

The unnamed tributary flows into Riga Run, which flows into Terrys Run, which in turn flows into Lake Anna.

A segment of Terrys Run (VAN-F07R_TRY01A00), beginning at the confluence with Riga Run and continuing downstream to the confluence with Lake Anna, is listed as not supporting the (1) fish consumption use due to PCBs in fish tissue and (2) recreation use due to *E. coli*.

1. Fish Consumption Use Impairment: The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 6/15/04 and modified 12/13/04 and 08/31/07, limits consumption of bluegill sunfish, carp, channel catfish, largemouth bass, striped bass, white catfish, and white perch to no more than two meals per month. The advisory also bans the consumption of gizzard shad. The affected area includes the entirety of Lake Anna and its tributaries Contrary Creek, Gold Mine Creek, and Terrys Run.

2. Recreation Use Impairment: Sufficient excursions from the instantaneous *E. coli* bacteria criterion (8 of 19 samples - 42.1%) were recorded at DEQ's ambient water quality monitoring station (8-TRY004.98) at the Route 629 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria

impairment, from 1998 through 2004. The E. coli bacteria impairment was first listed in 2006.

Several segments of Lake Anna downstream of Terrys Run are listed as not supporting the fish consumption use due to PCBs in fish tissue. The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 6/15/04 and modified 12/13/04 and 08/31/07, limits consumption of bluegill sunfish, carp, channel catfish, largemouth bass, striped bass, white catfish, and white perch to no more than two meals per month. The advisory also bans the consumption of gizzard shad. The affected area includes the entirety of Lake Anna and its tributaries Contrary Creek, Gold Mine Creek, and Terrys Run. The impaired segments listed are:

1. Terrys Run/Lake Anna (VAN-F07L_TRY01A04) – segment includes the Terrys Run arm of Lake Anna. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from four species (bluegill sunfish, carp, largemouth bass, white catfish) of fish sampled in 2003 and in tissue from five species (bluegill sunfish, carp, channel catfish, gizzard shad, white perch) of fish sampled in 2006 (7 total excursions) at monitoring station 8-TRY001.33.
2. Lake Anna/Pamunkey Creek (VAN-F07L_PMC01A04) - segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until the confluence with the North Anna River at The Splits. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from two species of fish (channel catfish, striped bass) sampled in 2006 (four total excursions) at monitoring station 8-PMC002.13.
3. Lake Anna (VAN-F07L_NAR03A02) - segment includes the upper portion North Anna River portion of Lake Anna, beginning at the boundary of F07, and continues downstream until the Route 208 bridge.
4. Lake Anna (VAN-F07L_NAR02A02) - segment includes the middle portion of Lake Anna, beginning at the Route 208 bridge, and continues downstream until the northern end of the Route 690 bridge. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from one species of fish (channel catfish) sampled in 2006 (three total excursions) at monitoring station 8-NAR044.68.
5. Lake Anna (VAN-F07L_NAR01A02) - segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam. Excursions above the water quality criterion based fish tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in tissue from three species of fish (carp, channel catfish, largemouth bass) sampled in 2003 (four total excursions) and in tissue from one species of fish (carp) sampled in 2006 at monitoring station 8-NAR034.92.

- Has a TMDL been prepared?

Terrys Run (VAN-F07R_TRY01A00) Recreation Use Impairment: A bacteria TMDL for the Terrys Run watershed was developed and approved by the U.S. EPA on November 4, 2005. The SWCB approved the TMDL on September 27, 2006. The sources of bacteria requiring reductions are pet, livestock and wildlife waste delivered directly to the stream or via pastureland or forest, human contributions from straight pipes, failing septic systems, and leaking sanitary sewers, and biosolid application.

The PCB TMDL for Terrys Run and all the segments in Lake Anna has not yet been completed.

- Will the TMDL include the receiving stream?

While the unnamed tributary was not specifically included in the Terrys Run Bacteria TMDL, all upstream point source discharges were included. The unnamed tributary will not be included in the Lake Anna PCB TMDL.

- Is there a WLA for the discharge?

Bacteria TMDL – WLA for VA0060330 is $8.21E+09$ CFU of *E. coli* per year.

- What is the schedule for the TMDL?

The Bacteria TMDL was completed and approved by EPA on 11/4/05.

The PCB TMDL for Terrys Run/Lake Anna segments (except for segment VAN-F07L_NAR01A02) are scheduled for due by 2018. Segment VAN-F07L_NAR01A02 is scheduled to be completed by 2014. Given the TMDL process, all of the Terrys Run/Lake Anna PCB impaired segments are expected to be completed by 2014.

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

The latitude and longitude coordinates provided in this planning statement are estimated based upon descriptive information regarding the outfall location. Please have the permit writer or inspector verify the coordinates of the outfall during the next site visit.

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Unionville Elementary School
Receiving Stream: Riga Run, UT

Permit No.: VA0060330

Version: OWP Guidance Memo 00-2011 (8/24/00)

| Stream Information | | | | Stream Flows | | | | Mixing Information | | | | Effluent Information | | | | | |
|-------------------------------------|---------------------|------------------------|----------|----------------------|-----------------------|---------|---------|--------------------------|---------|-------|-----------------------------|----------------------------|----|---------------------------|---------|----------|---------|
| Mean Hardness (as CaCO3) = | | | | 1Q10 (Annual) = | | | | Annual - 1Q10 Mix = | | | | Mean Hardness (as CaCO3) = | | | | | |
| 90% Temperature (Annual) = | | | | 7Q10 (Annual) = | | | | - 7Q10 Mix = | | | | 90% Temp (Annual) = | | | | | |
| 90% Temperature (Wet season) = | | | | 30Q10 (Annual) = | | | | - 30Q10 Mix = | | | | 90% Temp (Wet season) = | | | | | |
| 90% Maximum pH = | | | | 1Q10 (Wet season) = | | | | Wet Season - 1Q10 Mix = | | | | 90% Maximum pH = | | | | | |
| 10% Maximum pH = | | | | 30Q10 (Wet season) = | | | | - 30Q10 Mix = | | | | 10% Maximum pH = | | | | | |
| Tier Designation (1 or 2) = | | | | 30Q5 = | | | | | | | | SU | | | | | |
| (Public Water Supply (PWS) Y/N? = | | | | Harmonic Mean = | | | | | | | | 0.0047 MGD | | | | | |
| Trout Present Y/N? = | | | | Annual Average = | | | | | | | | | | | | | |
| Early Life Stages Present Y/N? = | | | | | | | | | | | | | | | | | |
| Parameter (ug/l unless noted) | Background Conc. | Water Quality Criteria | | | Wasteload Allocations | | | Antidegradation Baseline | | | Antidegradation Allocations | | | Most Limiting Allocations | | | |
| | | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH |
| Acenaphthene | 0 | -- | -- | na | 2.7E+03 | -- | -- | na | 2.7E+03 | -- | -- | -- | -- | -- | -- | na | 2.7E+03 |
| Acrolein | 0 | -- | -- | na | 7.8E+02 | -- | -- | na | 7.8E+02 | -- | -- | -- | -- | -- | -- | na | 7.8E+02 |
| Acrylonitrile ^c | 0 | -- | -- | na | 6.6E+00 | -- | -- | na | 6.6E+00 | -- | -- | -- | -- | -- | -- | na | 6.6E+00 |
| Aldrin ^c | 0 | 3.0E+00 | -- | na | 1.4E-03 | 3.0E+00 | -- | na | 1.4E-03 | -- | -- | -- | -- | 3.0E+00 | -- | na | 1.4E-03 |
| Ammonia-N (mg/l) (Yearly) | 0 | 1.01E+01 | 1.84E+00 | na | -- | 1.0E+01 | 1.8E+00 | na | -- | -- | -- | -- | -- | 1.0E+01 | 1.8E+00 | na | -- |
| Ammonia-N (mg/l) (High Flow) | 0 | 1.01E+01 | 2.80E+00 | na | -- | 1.0E+01 | 2.8E+00 | na | -- | -- | -- | -- | -- | 1.0E+01 | 2.8E+00 | na | -- |
| Anthracene | 0 | -- | -- | na | 1.1E+05 | -- | -- | na | 1.1E+05 | -- | -- | -- | -- | -- | -- | na | 1.1E+05 |
| Antimony | 0 | -- | -- | na | 4.3E+03 | -- | -- | na | 4.3E+03 | -- | -- | -- | -- | -- | -- | na | 4.3E+03 |
| Arsenic | 0 | 3.4E+02 | 1.5E+02 | na | -- | 3.4E+02 | 1.5E+02 | na | -- | -- | -- | -- | -- | 3.4E+02 | 1.5E+02 | na | -- |
| Barium | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | na | -- |
| Benzene ^c | 0 | -- | -- | na | 7.1E+02 | -- | -- | na | 7.1E+02 | -- | -- | -- | -- | -- | -- | na | 7.1E+02 |
| Benzidine ^c | 0 | -- | -- | na | 5.4E-03 | -- | -- | na | 5.4E-03 | -- | -- | -- | -- | -- | -- | na | 5.4E-03 |
| Benzo (a) anthracene ^c | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | na | 4.9E-01 |
| Benzo (b) fluoranthene ^c | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | na | 4.9E-01 |
| Benzo (k) fluoranthene ^c | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | na | 4.9E-01 |
| Benzo (a) pyrene ^c | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | na | 4.9E-01 |
| Bis(2-Chloroethyl) Ether | 0 | -- | -- | na | 1.4E+01 | -- | -- | na | 1.4E+01 | -- | -- | -- | -- | -- | -- | na | 1.4E+01 |
| Bis(2-Chloroisopropyl) Ether | 0 | -- | -- | na | 1.7E+05 | -- | -- | na | 1.7E+05 | -- | -- | -- | -- | -- | -- | na | 1.7E+05 |
| Bromoform ^c | 0 | -- | -- | na | 3.6E+03 | -- | -- | na | 3.6E+03 | -- | -- | -- | -- | -- | -- | na | 3.6E+03 |
| Butylbenzylphthalate | 0 | -- | -- | na | 5.2E+03 | -- | -- | na | 5.2E+03 | -- | -- | -- | -- | -- | -- | na | 5.2E+03 |
| Cadmium | 0 | 1.8E+00 | 6.6E-01 | na | -- | 1.8E+00 | 6.6E-01 | na | -- | -- | -- | -- | -- | 1.8E+00 | 6.6E-01 | na | -- |
| Carbon Tetrachloride ^c | 0 | -- | -- | na | 4.4E+01 | -- | -- | na | 4.4E+01 | -- | -- | -- | -- | -- | -- | na | 4.4E+01 |
| Chlordane ^c | 0 | 2.4E+00 | 4.3E-03 | na | 2.2E-02 | 2.4E+00 | 4.3E-03 | na | 2.2E-02 | -- | -- | -- | -- | 2.4E+00 | 4.3E-03 | na | 2.2E-02 |
| Chloride | 0 | 8.6E+05 | 2.3E+05 | na | -- | 8.6E+05 | 2.3E+05 | na | -- | -- | -- | -- | -- | 8.6E+05 | 2.3E+05 | na | -- |
| TRC | 0 | 1.9E+01 | 1.1E+01 | na | -- | 1.9E+01 | 1.1E+01 | na | -- | -- | -- | -- | -- | 1.9E+01 | 1.1E+01 | na | -- |
| Chlorobenzene | 0 | -- | -- | na | 2.1E+04 | -- | -- | na | 2.1E+04 | -- | -- | -- | -- | -- | -- | na | 2.1E+04 |

| Parameter (ug/l unless noted) | Background Conc. | Water Quality Criteria | | | Wasteload Allocations | | | Antidegradation Baseline | | | Antidegradation Allocations | | | Most Limiting Allocations | | |
|--|---------------------|------------------------|---------|----------|-----------------------|---------|---------|--------------------------|---------|---------|-----------------------------|----------|---------|---------------------------|---------|----------|
| | | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) |
| Chlorodibromomethane ^c | 0 | -- | -- | na | 3.4E+02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Chloroform ^c | 0 | -- | -- | na | 2.9E+04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| 2-Chloronaphthalene | 0 | -- | -- | na | 4.3E+03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| 2-Chlorophenol | 0 | -- | -- | na | 4.0E+02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Chlorpyrifos | 0 | 8.3E-02 | 4.1E-02 | na | -- | 8.3E-02 | 4.1E-02 | na | -- | 8.3E-02 | 4.1E-02 | na | -- | 8.3E-02 | 4.1E-02 | na |
| Chromium III | 0 | 3.2E+02 | 4.2E+01 | na | -- | 3.2E+02 | 4.2E+01 | na | -- | 3.2E+02 | 4.2E+01 | na | -- | 3.2E+02 | 4.2E+01 | na |
| Chromium VI | 0 | 1.6E+01 | 1.1E+01 | na | -- | 1.6E+01 | 1.1E+01 | na | -- | 1.6E+01 | 1.1E+01 | na | -- | 1.6E+01 | 1.1E+01 | na |
| Chromium, Total | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | na | -- | -- | -- | na |
| Chrysene ^c | 0 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Copper | 0 | 7.0E+00 | 5.0E+00 | na | -- | 7.0E+00 | 5.0E+00 | na | -- | 7.0E+00 | 5.0E+00 | na | -- | 7.0E+00 | 5.0E+00 | na |
| Cyanide | 0 | 2.2E+01 | 5.2E+00 | na | 2.2E+05 | 2.2E+01 | 5.2E+00 | na | 2.2E+05 | 2.2E+01 | 5.2E+00 | na | 2.2E+05 | 2.2E+01 | 5.2E+00 | na |
| DDD ^c | 0 | -- | -- | na | 8.4E-03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| DDE ^c | 0 | -- | -- | na | 5.9E-03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| DDT ^c | 0 | 1.1E+00 | 1.0E-03 | na | 5.9E-03 | 1.1E+00 | 1.0E-03 | na | 5.9E-03 | 1.1E+00 | 1.0E-03 | na | 5.9E-03 | 1.1E+00 | 1.0E-03 | na |
| Demeton | 0 | -- | 1.0E-01 | na | -- | -- | 1.0E-01 | na | -- | -- | -- | na | -- | -- | 1.0E-01 | na |
| Dibenz(a,h)anthracene ^c | 0 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Dibutyl phthalate | 0 | -- | -- | na | 1.2E+04 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Dichloromethane | 0 | -- | -- | na | 1.6E+04 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| (Methylene Chloride) ^c | 0 | -- | -- | na | 1.7E+04 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,2-Dichlorobenzene | 0 | -- | -- | na | 2.6E+03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,3-Dichlorobenzene | 0 | -- | -- | na | 2.6E+03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,4-Dichlorobenzene | 0 | -- | -- | na | 2.6E+03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 3,3-Dichlorobenzidine ^c | 0 | -- | -- | na | 7.7E-01 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Dichlorobromomethane ^c | 0 | -- | -- | na | 4.6E+02 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,2-Dichloroethane ^c | 0 | -- | -- | na | 9.9E+02 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,1-Dichloroethylene | 0 | -- | -- | na | 1.7E+04 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,2-trans-dichloroethylene | 0 | -- | -- | na | 1.4E+05 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 2,4-Dichlorophenol | 0 | -- | -- | na | 7.9E+02 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | na | -- | -- | -- | na |
| 1,2-Dichloropropane ^c | 0 | -- | -- | na | 3.9E+02 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,3-Dichloropropene | 0 | -- | -- | na | 1.7E+03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Dieldrin ^c | 0 | 2.4E-01 | 5.6E-02 | na | 1.4E-03 | 2.4E-01 | 5.6E-02 | na | 1.4E-03 | 2.4E-01 | 5.6E-02 | na | 1.4E-03 | 2.4E-01 | 5.6E-02 | na |
| Diethyl Phthalate | 0 | -- | -- | na | 1.2E+05 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Di-2-Ethylhexyl Phthalate ^c | 0 | -- | -- | na | 5.9E+01 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 2,4-Dimethylphenol | 0 | -- | -- | na | 2.3E+03 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Dimethyl Phthalate | 0 | -- | -- | na | 2.9E+06 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Di-n-Butyl Phthalate | 0 | -- | -- | na | 1.2E+04 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 2,4 Dinitrophenol | 0 | -- | -- | na | 1.4E+04 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 2-Methyl-4,6-Dinitrophenol | 0 | -- | -- | na | 7.65E+02 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 2,4-Dinitrotoluene ^c | 0 | -- | -- | na | 9.1E+01 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Dioxin (2,3,7,8- tetrachlorodibenzo-p-dioxin) (pg) | 0 | -- | -- | na | 1.2E-06 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| 1,2-Diphenylhydrazine ^c | 0 | -- | -- | na | 5.4E+00 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Alpha-Endosulfan | 0 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na |
| Beta-Endosulfan | 0 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na |
| Endosulfan Sulfate | 0 | -- | -- | na | 2.4E+02 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |
| Endrin | 0 | 8.6E-02 | 3.6E-02 | na | 8.1E-01 | 8.6E-02 | 3.6E-02 | na | 8.1E-01 | 8.6E-02 | 3.6E-02 | na | 8.1E-01 | 8.6E-02 | 3.6E-02 | na |
| Endrin Aldehyde | 0 | -- | -- | na | 8.1E-01 | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na |

| Parameter (ug/l unless noted) | Background Conc. | Water Quality Criteria | | | Wasteload Allocations | | | Antidegradation Baseline | | | Antidegradation Allocations | | | Most Limiting Allocations | | |
|--|---------------------|------------------------|---------|----------|-----------------------|---------|---------|--------------------------|----|-------|-----------------------------|----------|----|---------------------------|---------|----------|
| | | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) |
| Ethylbenzene | 0 | -- | -- | na | 2.9E+04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Fluoranthene | 0 | -- | -- | na | 3.7E+02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Fluorene | 0 | -- | -- | na | 1.4E+04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Foaming Agents | 0 | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Guthion | 0 | -- | 1.0E-02 | na | -- | -- | 1.0E-02 | -- | -- | -- | -- | -- | -- | -- | 1.0E-02 | na |
| Heptachlor ^c | 0 | 5.2E-01 | 3.8E-03 | na | 2.1E-03 | 5.2E-01 | 3.8E-03 | -- | -- | -- | -- | -- | -- | 5.2E-01 | 3.8E-03 | na |
| Heptachlor Epoxide ^c | 0 | 5.2E-01 | 3.8E-03 | na | 1.1E-03 | 5.2E-01 | 3.8E-03 | -- | -- | -- | -- | -- | -- | 5.2E-01 | 3.8E-03 | na |
| Hexachlorobenzene ^c | 0 | -- | -- | na | 7.7E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Hexachlorobutadiene ^c | 0 | -- | -- | na | 5.0E+02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Hexachlorocyclohexane | 0 | -- | -- | na | 1.3E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Alpha-BHC ^c | 0 | -- | -- | na | 4.6E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Beta-BHC ^c | 0 | -- | -- | na | 6.3E-01 | 9.5E-01 | -- | -- | -- | -- | -- | -- | -- | 9.5E-01 | -- | na |
| Hexachlorocyclohexane | 0 | 9.5E-01 | na | na | 1.7E+04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Gamma-BHC ^c (Lindane) | 0 | -- | -- | na | 8.9E+01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Hexachlorocyclopentadiene | 0 | -- | -- | na | 2.0E+00 | -- | 2.0E+00 | -- | -- | -- | -- | -- | -- | -- | 2.0E+00 | na |
| Hexachloroethane ^c | 0 | -- | 2.0E+00 | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Hydrogen Sulfide | 0 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Indeno (1,2,3-cd) pyrene ^c | 0 | -- | -- | na | 2.6E+04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Iron | 0 | -- | -- | na | 0.0E+00 | -- | 0.0E+00 | -- | -- | -- | -- | -- | -- | -- | 0.0E+00 | na |
| Isophorone ^c | 0 | -- | 0.0E+00 | na | 5.1E-02 | 1.4E+00 | 7.7E-01 | -- | -- | -- | -- | -- | -- | 1.4E+00 | 7.7E-01 | na |
| Kepone | 0 | 4.9E+01 | 5.6E+00 | na | 4.0E+03 | -- | 4.9E+01 | 5.6E+00 | -- | -- | -- | -- | -- | 4.9E+01 | 5.6E+00 | na |
| Lead | 0 | -- | 1.0E-01 | na | -- | -- | 1.0E-01 | -- | -- | -- | -- | -- | -- | -- | 1.0E-01 | na |
| Malathion | 0 | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Manganese | 0 | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Mercury | 0 | 1.4E+00 | 7.7E-01 | na | 5.1E-02 | 1.4E+00 | 7.7E-01 | -- | -- | -- | -- | -- | -- | 1.4E+00 | 7.7E-01 | na |
| Methyl Bromide | 0 | -- | -- | na | 4.0E+03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Methoxychlor | 0 | -- | 3.0E-02 | na | -- | -- | 3.0E-02 | -- | -- | -- | -- | -- | -- | -- | 3.0E-02 | na |
| Mirex | 0 | -- | 0.0E+00 | na | -- | -- | 0.0E+00 | -- | -- | -- | -- | -- | -- | -- | 0.0E+00 | na |
| Monochlorobenzene | 0 | -- | -- | na | 2.1E+04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Nickel | 0 | 1.0E+02 | 1.1E+01 | na | 4.6E+03 | 1.0E+02 | 1.1E+01 | -- | -- | -- | -- | -- | -- | 1.0E+02 | 1.1E+01 | na |
| Nitrate (as N) | 0 | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Nitrobenzene | 0 | -- | -- | na | 1.9E+03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| N-Nitrosodimethylamine ^c | 0 | -- | -- | na | 8.1E+01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| N-Nitrosodiphenylamine ^c | 0 | -- | -- | na | 1.6E+02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| N-Nitrosodi-n-propylamine ^c | 0 | -- | -- | na | 1.4E+01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |
| Parathion | 0 | 6.5E-02 | 1.3E-02 | na | -- | 6.5E-02 | 1.3E-02 | -- | -- | -- | -- | -- | -- | 6.5E-02 | 1.3E-02 | na |
| PCB-1016 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB-1221 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB-1232 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB-1242 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB-1248 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB-1254 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB-1260 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | -- | -- | -- | -- | -- | -- | -- | 1.4E-02 | na |
| PCB Total ^c | 0 | -- | -- | na | 1.7E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | na |

| Parameter (ug/l unless noted) | Background Conc. | Water Quality Criteria | | | | Wasteload Allocations | | | | Antidegradation Baseline | | | | Antidegradation Allocations | | | | Most Limiting Allocations | | | |
|--|---------------------|------------------------|---------|----------|---------|-----------------------|---------|----------|---------|--------------------------|---------|----------|----|-----------------------------|---------|----------|---------|---------------------------|---------|----------|---------|
| | | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH |
| Pentachlorophenol ^c | 0 | 7.7E-03 | 5.9E-03 | na | 8.2E+01 | 7.7E-03 | 5.9E-03 | na | 8.2E+01 | -- | -- | -- | -- | 7.7E-03 | 5.9E-03 | na | 8.2E+01 | 7.7E-03 | 5.9E-03 | na | 8.2E+01 |
| Phenol | 0 | -- | -- | na | 4.6E+06 | -- | -- | na | 4.6E+06 | -- | -- | -- | -- | -- | -- | na | 4.6E+06 | -- | -- | na | 4.6E+06 |
| Pyrene | 0 | -- | -- | na | 1.1E+04 | -- | -- | na | 1.1E+04 | -- | -- | -- | -- | -- | -- | na | 1.1E+04 | -- | -- | na | 1.1E+04 |
| Radionuclides (pCi/l except Beta/Photon) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na | -- |
| Gross Alpha Activity | 0 | -- | -- | na | 1.5E+01 | -- | -- | na | 1.5E+01 | -- | -- | -- | -- | -- | -- | na | 1.5E+01 | -- | -- | na | 1.5E+01 |
| Beta and Photon Activity (mrem/yr) | 0 | -- | -- | na | 4.0E+00 | -- | -- | na | 4.0E+00 | -- | -- | -- | -- | -- | -- | na | 4.0E+00 | -- | -- | na | 4.0E+00 |
| Strontium-90 | 0 | -- | -- | na | 8.0E+00 | -- | -- | na | 8.0E+00 | -- | -- | -- | -- | -- | -- | na | 8.0E+00 | -- | -- | na | 8.0E+00 |
| Tridium | 0 | -- | -- | na | 2.0E+04 | -- | -- | na | 2.0E+04 | -- | -- | -- | -- | -- | -- | na | 2.0E+04 | -- | -- | na | 2.0E+04 |
| Selenium | 0 | 2.0E+01 | 5.0E+00 | na | 1.1E+04 | 2.0E+01 | 5.0E+00 | na | 1.1E+04 | -- | -- | -- | -- | -- | -- | na | 1.1E+04 | 2.0E+01 | 5.0E+00 | na | 1.1E+04 |
| Silver | 0 | 1.0E+00 | -- | na | -- | 1.0E+00 | -- | na | -- | -- | -- | -- | -- | -- | -- | na | -- | 1.0E+00 | -- | na | -- |
| Sulfate | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na | -- |
| 1,1,2,2-Tetrachloroethane ^c | 0 | -- | -- | na | 1.1E+02 | -- | -- | na | 1.1E+02 | -- | -- | -- | -- | -- | -- | na | 1.1E+02 | -- | -- | na | 1.1E+02 |
| Tetrachloroethylene ^c | 0 | -- | -- | na | 8.9E+01 | -- | -- | na | 8.9E+01 | -- | -- | -- | -- | -- | -- | na | 8.9E+01 | -- | -- | na | 8.9E+01 |
| Thallium | 0 | -- | -- | na | 6.3E+00 | -- | -- | na | 6.3E+00 | -- | -- | -- | -- | -- | -- | na | 6.3E+00 | -- | -- | na | 6.3E+00 |
| Toluene | 0 | -- | -- | na | 2.0E+05 | -- | -- | na | 2.0E+05 | -- | -- | -- | -- | -- | -- | na | 2.0E+05 | -- | -- | na | 2.0E+05 |
| Total dissolved solids | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na | -- |
| Toxaphene ^c | 0 | 7.3E-01 | 2.0E-04 | na | 7.5E-03 | 7.3E-01 | 2.0E-04 | na | 7.5E-03 | -- | -- | -- | -- | -- | -- | na | 7.5E-03 | 7.3E-01 | 2.0E-04 | na | 7.5E-03 |
| Tributyltin | 0 | 4.6E-01 | 6.3E-02 | na | -- | 4.6E-01 | 6.3E-02 | na | -- | -- | -- | -- | -- | -- | -- | na | -- | 4.6E-01 | 6.3E-02 | na | -- |
| 1,2,4-Trichlorobenzene | 0 | -- | -- | na | 9.4E+02 | -- | -- | na | 9.4E+02 | -- | -- | -- | -- | -- | -- | na | 9.4E+02 | -- | -- | na | 9.4E+02 |
| 1,1,2-Trichloroethane ^c | 0 | -- | -- | na | 4.2E+02 | -- | -- | na | 4.2E+02 | -- | -- | -- | -- | -- | -- | na | 4.2E+02 | -- | -- | na | 4.2E+02 |
| Trichloroethylene ^c | 0 | -- | -- | na | 8.1E+02 | -- | -- | na | 8.1E+02 | -- | -- | -- | -- | -- | -- | na | 8.1E+02 | -- | -- | na | 8.1E+02 |
| 2,4,6-Trichlorophenol ^c | 0 | -- | -- | na | 6.5E+01 | -- | -- | na | 6.5E+01 | -- | -- | -- | -- | -- | -- | na | 6.5E+01 | -- | -- | na | 6.5E+01 |
| 2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | na | -- | -- | -- | na | -- |
| Vinyl Chloride ^c | 0 | -- | -- | na | 6.1E+01 | -- | -- | na | 6.1E+01 | -- | -- | -- | -- | -- | -- | na | 6.1E+01 | -- | -- | na | 6.1E+01 |
| Zinc | 0 | 6.5E+01 | 6.6E+01 | na | 6.9E+04 | 6.5E+01 | 6.6E+01 | na | 6.9E+04 | -- | -- | -- | -- | -- | -- | na | 6.9E+04 | 6.5E+01 | 6.6E+01 | na | 6.9E+04 |

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing information.
Antidegradation WLAs are based upon a complete mix.
Antidegradation Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Note: do not use QL's lower than the minimum QL's provided in agency guidance

| Metal | Target Value (SSTV) |
|--------------|---------------------|
| Antimony | 4.3E+03 |
| Arsenic | 9.0E+01 |
| Barium | na |
| Cadmium | 3.9E-01 |
| Chromium III | 2.5E+01 |
| Chromium VI | 6.4E+00 |
| Copper | 2.8E+00 |
| Iron | na |
| Lead | 3.4E+00 |
| Manganese | na |
| Mercury | 5.1E-02 |
| Nickel | 6.8E+00 |
| Selenium | 3.0E+00 |
| Silver | 4.2E-01 |
| Zinc | 2.6E+01 |

Analysis of the UNIONVI. J ELEMENTARY SCHOOL STP e: uent data for AMMONIA
Averaging period for standard = 30 days

The statistics for AMMONIA are:

| | | |
|-------------------------|---|--|
| Number of values | = | 1 |
| Quantification level | = | .2 |
| Number < quantification | = | 0 |
| Expected value | = | 10 |
| Variance | = | 36.00001 |
| C.V. | = | .6 |
| 97th percentile | = | 24.33418 |
| Statistics used | = | Reasonable potential assumptions - Type 2 data |

The WLAs for AMMONIA are:

| | | |
|------------------|---|------|
| Acute WLA | = | 6.64 |
| Chronic WLA | = | ---- |
| Human Health WLA | = | ---- |

Limits are based on acute toxicity and 1 samples/month, 1 samples/week

| | | |
|-----------------------|---|----------|
| Maximum daily limit | = | 6.64 |
| Average weekly limit | = | 6.639999 |
| Average monthly limit | = | 6.639999 |

Note: The maximum daily limit applies to industrial dischargers
The average weekly limit applies to POTWs
The average monthly limit applies to both.

The Data are
10

6/24/99 ammonia calculation

Criteria and WLA Calculations for Ammonia based upon freshwater criteria (Nontidal Only)

Date : 03/24/04

Facility : Unionville Elementary School
 Permit Number : VA0060330
 Comments : Ammonia as N

| | | | |
|------------------------------------|---|---------|----------------------------|
| pH | = | 7.90 | S.U. |
| Temperature | = | 21.00 | C |
| Trout Present (Y or N) | = | N | |
| Early Life Stages Present (Y or N) | = | N | |
| 1Q10 | = | 0.000 | MGD |
| 7Q10 | = | 0.000 | MGD |
| 30Q10 | = | 0.00 | MGD |
| Harmonic Mean | = | 0.00 | MGD |
| Design Flow | = | 0.0047 | MGD |
| Percentage of Acute Mix (1Q10) | = | 100.00% | NA |
| Percentage of Chronic Mix (30Q10) | = | 100.00% | NA |
| Water Body Tier | = | 1 | (1=No Antideg, 2= Antideg) |

Acute - Trout Present

$$\text{Calculated Ammonia Criteria} = (0.275 / 1 + 10^{(7.204-pH)}) + (39 / 1 + 10^{(pH-7.204)})$$

$$\text{Calculated Ammonia Criteria} = 6.77$$

Acute - Trout Absent

$$\text{Calculated Ammonia Criteria} = (0.411 / 1 + 10^{(7.204-pH)}) + (58.4 / 1 + 10^{(pH-7.204)})$$

$$\text{Calculated Ammonia Criteria} = 10.13$$

$$\text{Total Acute Ammonia Criteria} = 10.13 \text{ mg/l as N}$$

Chronic - Early Life Stages Present

$$\text{Calculated Ammonia Criteria} = ((0.0577 / 1 + 10^{(7.028-pH)}) + (2.487 / 1 + 10^{(pH-7.028)})) \times 2.85 \text{ or } 1.45 \times 10(0.028(25\text{-temp}), \text{ which ever is less})$$

$$\text{Calculated MIN} = 1.88$$

$$\text{MIN Comparison} = 1.88$$

Calculated value is less than 2.85

$$\text{Calculated Ammonia Criteria} = 1.84$$

Chronic - Early Life Stages Absent

$$\text{Calculated Ammonia Criteria} = ((0.0577 / 1 + 10^{(7.028-pH)}) + (2.487 / 1 + 10^{(pH-7.028)})) \times \text{Temp. in C or 7, whichever is greater}$$

$$\text{MAX Comparison} = 21.00$$

Temperature value enter will be used

$$\text{Calculated Ammonia Criteria} = 1.84$$

$$\text{Total Chronic Ammonia Criteria} = 1.84 \text{ mg/l as N}$$

| Parameters | Instream Background | Acute Criteria (mg/l) | Acute Baseline (mg/l) | Acute WLA (mg/l) | Acute WLA (mg/l) | Antideg Acute WLA (mg/l) | SSTV = 0.4 X aWLA (mg/l) | Chronic Criteria (mg/l) | Chronic Baseline (mg/l) | Chronic WLA (mg/l) | Antideg Chronic WLA (mg/l) | SSTV = 0.6 X cWLA (mg/l) |
|------------|---------------------|-----------------------|-----------------------|------------------|------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------|----------------------------|--------------------------|
| Ammonia | ND | 10.13 | NA | 10.13 | 10.13 | NA | 4.05 | 1.84 | NA | 1.84 | NA | 1.11 |

Notes:

- 1) ND = No Data available, and therefore the background concentrations are assumed to be Zero.
- 2) Acute Criteria = One-hour average concentration of total ammonia nitrogen in freshwater shall not exceed, more than once every three years on the average.
- 3) Chronic Criteria = the 30-day average concentration of total ammonia nitrogen where early life stages of fish are present in freshwater shall not exceed, more than once every three years on the average.
- 4) Acute criteria/WLA based on 1Q10 flow; chronic criteria/WLA based on 7Q10 flow.

6/3/2009 6:26:07 PM

Facility = Unionville Elementary School
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 10.1
WLAc =
Q.L. = .2
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average = 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 10.1
Average Weekly limit = 10.1
Average Monthly Limit = 10.1

The data are:

Riga Run at Route 650 (8-RIG004.52)
Stream Hardness, Temperature and pH data

| Collection date | Hardness | Temperature | Temperature sorted | pH | pH Sorted |
|------------------|----------|-----------------|-----------------------|------|------------|
| 7/22/1999 | 22.1 | 23 | 23 | -- | -- |
| 9/22/1999 | 18.2 | 22.9 | 22.9 | -- | -- |
| 11/22/1999 | 13.7 | 22.68 | 22.68 | -- | -- |
| 1/19/2000 | 15.1 | 20.22 | 20.22 | -- | -- |
| 2/23/2000 | 19 | 20.18 | 20.18 | 7.24 | 7.24 |
| 3/8/2000 | 15 | 17.9 | 17.9 | 7.1 | 7.1 |
| 4/18/2000 | 26 | 14.9 | 14.9 | 7.04 | 7.04 |
| 5/25/2000 | 23 | 11.4 | 11.4 | 6.73 | 6.73 |
| 6/27/2000 | 19.2 | 11 | 11 | 6.7 | 6.7 |
| 7/25/2000 | 36 | 9.4 | 9.4 | 6.6 | 6.6 |
| 8/24/2000 | 13.9 | 4.4 | 4.4 | 6.3 | 6.3 |
| 7/20/2006 | | 0.5 | 0.5 | 6.1 | 6.1 |
| Average Hardness | 20.1 | 90th percentile | 22.9 | | 7.1 |

Define Point of Interest

38,15,43.8 -77,57,04.9

is the Search Point

Search Point

- ☒ Change to "clicked" map point
- ☐ Fixed at 38,15,43.8 - 77,57,04.9

Show Position Rings

- ☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

Show Search Area

- ☒ Yes ☐ No

2 miles

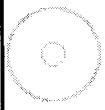
Search Point is at map center

Base Map Choices

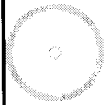
Topography ☒

Map Overlay Choices

Current List: Position, Search

Map Overlay Legend

Position Rings
1 mile and 1/4 mile at the Search Point



2 mile radius Search Area



Map Click

Pan

Map Scale

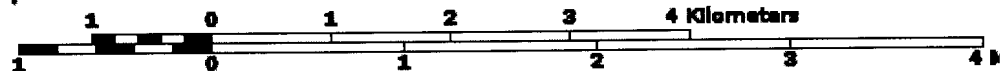
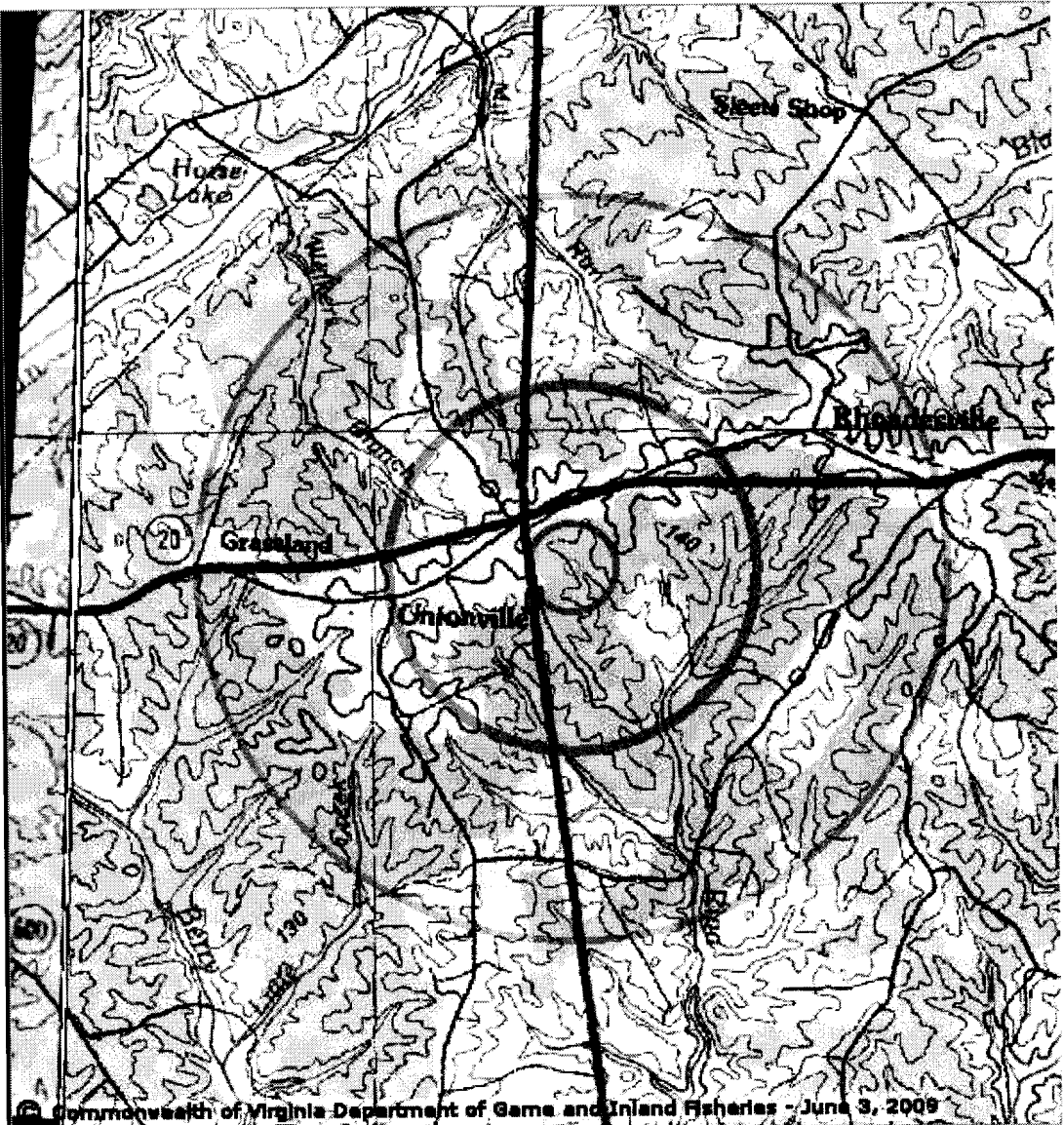
In

Zoom

Screen Size

Small

Size



Point of Search 38,15,43.8 -77,57,04.9

Map Location 38,15,43.8 -77,57,04.9

Attachment 9

Select Coordinate System: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 236988 and top 4243840. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 60 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west, 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet to west by 31501 feet north to south for a total of 35.5 square miles.

A UTM Zone change occurs within the image. The left-hand side of the image is a pseudo projection from UTM Zone 17 into UTM Zone 18 resulting in reduced spatial accuracy within the portion of the image occurring in UTM Zone 17.

Black and white aerial photography acquired near 1990 and topographic maps are from the United States Department of the Interior, United States Geological Survey.

Shaded topographic maps are from TOPO! ©2006 National Geographic

<http://www.nationalgeographic.com/topo>

Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries

map assembled 2009-06-03 17:00:30 (qa/qc April 2, 2009 16:35 - tn=241882 dist=32181)

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Virginia Department of Game and Inland Fisheries

6/3/2009 4:58:38 PM

Fish and Wildlife Information Service

VaFWIS Initial Project Assessment Report

Compiled on

[Help](#)

6/3/2009, 4:58:38 PM

Known or likely to occur within a 2 mile radius of 38,15,43.9

77,57,04.9

in 137 Orange County, VA

349 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 25) (25 species with Status* or Tier I**)

| BOVA Code | Status* | Tier** | Common Name | Scientific Name | Confirmed | Database(s) |
|-----------|---------|--------|----------------------------|--------------------------------|-----------|----------------------|
| 040129 | ST | I | Sandpiper, upland | Bartramia longicauda | | BOVA |
| 040293 | ST | I | Shrike, loggerhead | Lanius ludovicianus | | BOVA |
| 040093 | FSST | II | Eagle, bald | Haliaeetus leucocephalus | | BOVA |
| 040292 | ST | | Shrike, migrant loggerhead | Lanius ludovicianus migrans | | BOVA |
| 100248 | FS | I | Fritillary, regal | Speyeria idalia idalia | | BOVA |
| 060029 | FSSS | III | Lance, yellow | Elliptio lanceolata | | BOVA |
| 010077 | SS | I | Shiner, bridle | Notropis bifrenatus | | BOVA |
| 040266 | SS | II | Wren, winter | Troglodytes troglodytes | | BOVA |
| 030063 | CC | III | Turtle, spotted | Clemmys guttata | | BOVA |
| 040094 | SS | III | Harrier, northern | Circus cyaneus | | BOVA |
| 040204 | SS | III | Owl, barn | Tyto alba pratincola | Yes | Collections,BBA,BOVA |
| 030012 | CC | IV | Rattlesnake, timber | Crotalus horridus | | BOVA |
| 040264 | SS | IV | Creeper, brown | Certhia americana | | BOVA |
| 040364 | SS | | Dickcissel | Spiza americana | | BOVA |
| 040032 | SS | | Egret, great | Ardea alba egretta | | BOVA |
| 040366 | SS | | Finch, purple | Carpodacus purpureus | | BOVA |
| 040285 | SS | | Kinglet, golden-crowned | Regulus satrapa | | BOVA |
| 040112 | SS | | Moorhen, common | Gallinula chloropus cachinnans | | BOVA |
| | | | Nuthatch, red- | | | |

| | | | | | |
|--------|----|---|--------------------------------------|-----------------------------------|------|
| 040262 | SS | | <u>breasted</u> | <i>Sitta canadensis</i> | BOVA |
| 040189 | SS | | <u>Tern, Caspian</u> | <i>Sterna caspia</i> | BOVA |
| 040278 | SS | | <u>Thrush, hermit</u> | <i>Catharus guttatus</i> | BOVA |
| 040314 | SS | | <u>Warbler, magnolia</u> | <i>Dendroica magnolia</i> | BOVA |
| 050045 | SS | | <u>Otter, northern river</u> | <i>Lontra canadensis lataxina</i> | BOVA |
| 040225 | | I | <u>Sapsucker, yellow-bellied</u> | <i>Sphyrapicus varius</i> | BOVA |
| 040319 | | I | <u>Warbler, black-throated green</u> | <i>Dendroica virens</i> | BOVA |

To view **All 349 species** [View 349](#)

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; SC=State Candidate; CC=Collection Concern; SS=State Special Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Anadromous Fish Use Streams

N/A

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters

N/A

Cold Water Stream Survey (Trout Streams) Managed Trout Species

N/A

Public Holdings:

N/A

audit no. 241882 6/3/2009 4:58:38 PM Virginia Fish and Wildlife Information Service
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VA0060330 Unionville Elementary School

DMR data for December 2003 through April 2009

| Monitor Start Date | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | Tag | CE SD |
|-----------------------|----------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|-----|----------|
| 4/1/09 | 4/30/09 | 001 FLOW | 0.0018 | 0.0047 | 0.0035 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 3/1/09 | 3/31/09 | 001 FLOW | 0.0016 | 0.0047 | 0.0035 | NL | MGD | | ***** | | ***** | | ***** | | | M A | |
| 2/1/09 | 2/28/09 | 001 FLOW | 0.0016 | 0.0047 | 0.0030 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 1/1/09 | 1/31/09 | 001 FLOW | 0.0020 | 0.0047 | 0.0040 | NL | MGD | | ***** | | ***** | | ***** | | | M A | |
| 12/1/08 | 12/31/08 | 001 FLOW | 0.0016 | 0.0047 | 0.0045 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 11/1/08 | 11/30/08 | 001 FLOW | 0.0016 | 0.0047 | 0.0030 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 10/1/08 | 10/31/08 | 001 FLOW | 0.0019 | 0.0047 | 0.0038 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 9/1/08 | 9/30/08 | 001 FLOW | 0.0022 | 0.0047 | 0.0043 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 8/1/08 | 8/31/08 | 001 FLOW | 0.0021 | 0.0047 | 0.0040 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 7/1/08 | 7/31/08 | 001 FLOW | 0.0004 | 0.0047 | 0.0008 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 6/1/08 | 6/30/08 | 001 FLOW | 0.0005 | 0.0047 | 0.0018 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 5/1/08 | 5/31/08 | 001 FLOW | 0.0022 | 0.0047 | 0.0083 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 4/1/08 | 4/30/08 | 001 FLOW | 0.0017 | 0.0047 | 0.0033 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 3/1/08 | 3/31/08 | 001 FLOW | 0.0016 | 0.0047 | 0.0028 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 2/1/08 | 2/29/08 | 001 FLOW | 0.0011 | 0.0047 | 0.0023 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 1/1/08 | 1/31/08 | 001 FLOW | 0.0021 | 0.0047 | 0.0045 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 12/1/07 | 12/31/07 | 001 FLOW | 0.0019 | 0.0047 | 0.0035 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 11/1/07 | 11/30/07 | 001 FLOW | 0.0020 | 0.0047 | 0.0033 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 10/1/07 | 10/31/07 | 001 FLOW | 0.0021 | 0.0047 | 0.0028 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 9/1/07 | 9/30/07 | 001 FLOW | 0.0023 | 0.0047 | 0.0030 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 8/1/07 | 8/31/07 | 001 FLOW | 0.0023 | 0.0047 | 0.0028 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 7/1/07 | 7/31/07 | 001 FLOW | 0.0012 | 0.0047 | 0.0020 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 6/1/07 | 6/30/07 | 001 FLOW | 0.0014 | 0.0047 | 0.004 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 5/1/07 | 5/31/07 | 001 FLOW | 0.0019 | 0.0047 | 0.0035 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 4/1/07 | 4/30/07 | 001 FLOW | 0.0025 | 0.0047 | 0.0043 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 3/1/07 | 3/31/07 | 001 FLOW | 0.0021 | 0.0047 | 0.0063 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 2/1/07 | 2/28/07 | 001 FLOW | 0.0020 | 0.0047 | 0.0043 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 1/1/07 | 1/31/07 | 001 FLOW | 0.0019 | 0.0047 | 0.0028 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 12/1/06 | 12/31/06 | 001 FLOW | 0.0017 | 0.0047 | 0.0030 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 11/1/06 | 11/30/06 | 001 FLOW | 0.0029 | 0.0047 | 0.007 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 10/1/06 | 10/31/06 | 001 FLOW | 0.0029 | 0.0047 | 0.0095 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 9/1/06 | 9/30/06 | 001 FLOW | 0.0016 | 0.0047 | 0.0038 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 8/1/06 | 8/31/06 | 001 FLOW | 0.0012 | 0.0047 | 0.0018 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 7/1/06 | 7/31/06 | 001 FLOW | | 0.0047 | | NL | MGD | | ***** | | ***** | | ***** | | | M A | |
| 6/1/06 | 6/30/06 | 001 FLOW | 0.0019 | 0.0047 | 0.0023 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 5/1/06 | 5/31/06 | 001 FLOW | 0.0020 | 0.0047 | 0.0033 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 4/1/06 | 4/30/06 | 001 FLOW | 0.0021 | 0.0047 | 0.0040 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |
| 3/1/06 | 3/31/06 | 001 FLOW | 0.0018 | 0.0047 | 0.0033 | NL | MGD | | ***** | | ***** | | ***** | | 0 | M A | |

| Monitor Start Date | | ID # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex # | TR # | CRDS |
|-----------------------|----------|---------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|---------|---------|------|
| 2/1/06 | 2/28/06 | 001 | FLOW | .0027 | 0.0047 | .0035 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 1/1/06 | 1/31/06 | 001 | FLOW | .0017 | 0.0047 | .003 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 12/1/05 | 12/31/05 | 001 | FLOW | .0019 | 0.0047 | .0028 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 11/1/05 | 11/30/05 | 001 | FLOW | .0017 | 0.0047 | .003 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 10/1/05 | 10/31/05 | 001 | FLOW | .0023 | 0.0047 | .0030 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 9/1/05 | 9/30/05 | 001 | FLOW | .0021 | 0.0047 | .004 | NL | | | ***** | | ***** | | ***** | | | M | A |
| 8/1/05 | 8/31/05 | 001 | FLOW | .0016 | 0.0047 | .0033 | NL | | | ***** | | ***** | | ***** | | | M | A |
| 7/1/05 | 7/31/05 | 001 | FLOW | .0003 | 0.0047 | .0005 | NL | | | ***** | | ***** | | ***** | | | M | A |
| 6/1/05 | 6/30/05 | 001 | FLOW | .0016 | 0.0047 | .0033 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 5/1/05 | 5/31/05 | 001 | FLOW | .0019 | 0.0047 | .0045 | NL | | | ***** | | ***** | | ***** | | | M | A |
| 4/1/05 | 4/30/05 | 001 | FLOW | .0021 | 0.0047 | .0040 | NL | | | ***** | | ***** | | ***** | | | M | A |
| 3/1/05 | 3/31/05 | 001 | FLOW | .0018 | 0.0047 | .003 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 2/1/05 | 2/28/05 | 001 | FLOW | .017 | 0.0047 | .0025 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 1/1/05 | 1/31/05 | 001 | FLOW | .0016 | 0.0047 | .0023 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 12/1/04 | 12/31/04 | 001 | FLOW | .0019 | 0.0047 | .0028 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 11/1/04 | 11/30/04 | 001 | FLOW | .0021 | 0.0047 | .010 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 10/1/04 | 10/31/04 | 001 | FLOW | .0021 | 0.0047 | .0025 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 9/1/04 | 9/30/04 | 001 | FLOW | .0016 | 0.0047 | .0030 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 8/1/04 | 8/31/04 | 001 | FLOW | .0010 | 0.0047 | .0013 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 7/1/04 | 7/31/04 | 001 | FLOW | .0006 | 0.0047 | .0008 | NL | | | ***** | | ***** | | ***** | | 0 | M | A |
| 6/1/04 | 6/30/04 | 001 | FLOW | .0012 | 0.0047 | .0025 | NL | | | ***** | | ***** | | ***** | | | M | H |
| 5/1/04 | 5/31/04 | 001 | FLOW | .0020 | 0.0047 | .0043 | NL | | | ***** | | ***** | | ***** | | 0 | M | H |
| 4/1/04 | 4/30/04 | 001 | FLOW | .0020 | 0.0047 | .0033 | NL | | | ***** | | ***** | | ***** | | 0 | M | H |
| 3/1/04 | 3/31/04 | 001 | FLOW | .0018 | 0.0047 | .0033 | NL | | | ***** | | ***** | | ***** | | 0 | M | H |
| 2/1/04 | 2/29/04 | 001 | FLOW | .0018 | 0.0047 | .0033 | NL | | | ***** | | ***** | | ***** | | 0 | M | H |
| 1/1/04 | 1/31/04 | 001 | FLOW | .0017 | 0.0047 | .0035 | NL | | | ***** | | ***** | | ***** | | 0 | M | H |
| 12/1/03 | 12/31/03 | 001 | FLOW | .0026 | 0.0047 | .0048 | NL | | | ***** | | ***** | | ***** | | 0 | M | H |
| 4/1/09 | 4/30/09 | 002 | PH | | ***** | | ***** | | 6.2 | 6.0 | | ***** | 8.1 | 9.0 | SU | 0 | M | A |
| 3/1/09 | 3/31/09 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 8.0 | 9.0 | SU | 0 | M | A |
| 2/1/09 | 2/28/09 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.8 | 9.0 | SU | 0 | M | A |
| 1/1/09 | 1/31/09 | 002 | PH | | ***** | | ***** | | 7.0 | 6.0 | | ***** | 7.4 | 9.0 | SU | | M | A |
| 12/1/08 | 12/31/08 | 002 | PH | | ***** | | ***** | | 6.8 | 6.0 | | ***** | 7.6 | 9.0 | SU | 0 | M | A |
| 11/1/08 | 11/30/08 | 002 | PH | | ***** | | ***** | | 7.0 | 6.0 | | ***** | 8.1 | 9.0 | SU | 0 | M | A |
| 10/1/08 | 10/31/08 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 7.9 | 9.0 | SU | 0 | M | A |
| 9/1/08 | 9/30/08 | 002 | PH | | ***** | | ***** | | 6.8 | 6.0 | | ***** | 8.1 | 9.0 | SU | 0 | M | A |
| 8/1/08 | 8/31/08 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.4 | 9.0 | SU | 0 | M | A |
| 7/1/08 | 7/31/08 | 002 | PH | | ***** | | ***** | | 8.5 | 6.0 | | ***** | 8.6 | 9.0 | SU | 0 | M | A |
| 6/1/08 | 6/30/08 | 002 | PH | | ***** | | ***** | | 7.0 | 6.0 | | ***** | 7.8 | 9.0 | SU | 0 | M | A |
| 5/1/08 | 5/31/08 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 8.2 | 9.0 | SU | 0 | M | A |
| 4/1/08 | 4/30/08 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 8.0 | 9.0 | SU | 0 | M | A |
| 3/1/08 | 3/31/08 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.1 | 9.0 | SU | 0 | M | A |

| Monitor Start Date | | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T ed | C EDS |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|---------|----------|
| 2/1/08 | 2/29/08 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.3 | 9.0 | SU | 0 | M | A |
| 1/1/08 | 1/31/08 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.2 | 9.0 | SU | 0 | M | A |
| 12/1/07 | 12/31/07 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.4 | 9.0 | SU | 0 | M | A |
| 11/1/07 | 11/30/07 | 002 | PH | | ***** | | ***** | | 6.2 | 6.0 | | ***** | 6.9 | 9.0 | SU | 0 | M | A |
| 10/1/07 | 10/31/07 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.4 | 9.0 | SU | 0 | M | A |
| 9/1/07 | 9/30/07 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.2 | 9.0 | SU | 0 | M | A |
| 8/1/07 | 8/31/07 | 002 | PH | | ***** | | ***** | | 6.4 | 6.0 | | ***** | 7.7 | 9.0 | SU | 0 | M | A |
| 7/1/07 | 7/31/07 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 6.7 | 9.0 | SU | 0 | M | A |
| 6/1/07 | 6/30/07 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.2 | 9.0 | SU | 0 | M | A |
| 5/1/07 | 5/31/07 | 002 | PH | | ***** | | ***** | | 6.4 | 6.0 | | ***** | 7.3 | 9.0 | SU | 0 | M | A |
| 4/1/07 | 4/30/07 | 002 | PH | | ***** | | ***** | | 6.4 | 6.0 | | ***** | 7.2 | 9.0 | SU | 0 | M | A |
| 3/1/07 | 3/31/07 | 002 | PH | | ***** | | ***** | | 6.2 | 6.0 | | ***** | 7.0 | 9.0 | SU | 0 | M | A |
| 2/1/07 | 2/28/07 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.4 | 9.0 | SU | 0 | M | A |
| 1/1/07 | 1/31/07 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.6 | 9.0 | SU | 0 | M | A |
| 12/1/06 | 12/31/06 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 7.7 | 9.0 | SU | 0 | M | A |
| 11/1/06 | 11/30/06 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.3 | 9.0 | SU | 0 | M | A |
| 10/1/06 | 10/31/06 | 002 | PH | | ***** | | ***** | | 6.2 | 6.0 | | ***** | 7.6 | 9.0 | SU | 0 | M | A |
| 9/1/06 | 9/30/06 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 7.8 | 9.0 | SU | 0 | M | A |
| 8/1/06 | 8/31/06 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.3 | 9.0 | SU | 0 | M | A |
| 7/1/06 | 7/31/06 | 002 | PH | | ***** | | ***** | | | 6.0 | | ***** | | 9.0 | SU | | M | A |
| 6/1/06 | 6/30/06 | 002 | PH | | ***** | | ***** | | 6.8 | 6.0 | | ***** | 7.4 | 9.0 | SU | 0 | M | A |
| 5/1/06 | 5/31/06 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.3 | 9.0 | SU | 0 | M | A |
| 4/1/06 | 4/30/06 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.2 | 9.0 | SU | 0 | M | A |
| 3/1/06 | 3/31/06 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.3 | 9.0 | | 0 | M | A |
| 2/1/06 | 2/28/06 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.2 | 9.0 | | 0 | M | A |
| 1/1/06 | 1/31/06 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.2 | 9.0 | | 0 | M | A |
| 12/1/05 | 12/31/05 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 7.2 | 9.0 | | 0 | M | A |
| 11/1/05 | 11/30/05 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.2 | 9.0 | | 0 | M | A |
| 10/1/05 | 10/31/05 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.2 | 9.0 | | 0 | M | A |
| 9/1/05 | 9/30/05 | 002 | PH | | ***** | | ***** | | 6.4 | 6.0 | | ***** | 7.4 | 9.0 | | 0 | M | A |
| 8/1/05 | 8/31/05 | 002 | PH | | ***** | | ***** | | 6.9 | 6.0 | | ***** | 7.5 | 9.0 | | | M | A |
| 7/1/05 | 7/31/05 | 002 | PH | | ***** | | ***** | | 7.0 | 6.0 | | ***** | 7.5 | 9.0 | | | M | A |
| 6/1/05 | 6/30/05 | 002 | PH | | ***** | | ***** | | 6.9 | 6.0 | | ***** | 7.4 | 9.0 | | 0 | M | A |
| 5/1/05 | 5/31/05 | 002 | PH | | ***** | | ***** | | 7.0 | 6.0 | | ***** | 7.9 | 9.0 | | | M | A |
| 4/1/05 | 4/30/05 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 7.6 | 9.0 | | | M | A |
| 3/1/05 | 3/31/05 | 002 | PH | | ***** | | ***** | | 6.2 | 6.0 | | ***** | 8.0 | 9.0 | | 0 | M | A |
| 2/1/05 | 2/28/05 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.8 | 9.0 | | 0 | M | A |
| 1/1/05 | 1/31/05 | 002 | PH | | ***** | | ***** | | 6.4 | 6.0 | | ***** | 8.0 | 9.0 | | 0 | M | A |
| 12/1/04 | 12/31/04 | 002 | PH | | ***** | | ***** | | 6.6 | 6.0 | | ***** | 7.8 | 9.0 | | 0 | M | A |
| 11/1/04 | 11/30/04 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.4 | 9.0 | | 0 | M | A |
| 10/1/04 | 10/31/04 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.3 | 9.0 | | 0 | M | A |

| Monitor Start Date | | D # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T S | C S |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|--------|
| 9/1/04 | 9/30/04 | 002 | PH | | ***** | | ***** | | 6.0 | 6.0 | | ***** | 7.5 | 9.0 | | 0 | M | A |
| 8/1/04 | 8/31/04 | 002 | PH | | ***** | | ***** | | 7.0 | 6.0 | | ***** | 8.1 | 9.0 | | 0 | M | A |
| 7/1/04 | 7/31/04 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.4 | 9.0 | | 0 | M | A |
| 6/1/04 | 6/30/04 | 002 | PH | | ***** | | ***** | | 6.4 | 6.0 | | ***** | 7.0 | 9.0 | | 0 | M | H |
| 5/1/04 | 5/31/04 | 002 | PH | | ***** | | ***** | | 6.5 | 6.0 | | ***** | 7.4 | 9.0 | | 0 | M | H |
| 4/1/04 | 4/30/04 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.3 | 9.0 | | 0 | M | H |
| 3/1/04 | 3/31/04 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 8.5 | 9.0 | | 0 | M | H |
| 2/1/04 | 2/29/04 | 002 | PH | | ***** | | ***** | | 7.1 | 6.0 | | ***** | 8.2 | 9.0 | | 0 | M | H |
| 1/1/04 | 1/31/04 | 002 | PH | | ***** | | ***** | | 6.7 | 6.0 | | ***** | 8.0 | 9.0 | | 0 | M | H |
| 12/1/03 | 12/31/03 | 002 | PH | | ***** | | ***** | | 6.3 | 6.0 | | ***** | 7.9 | 9.0 | | 0 | M | H |
| 4/1/09 | 4/30/09 | 003 | BOD5 | 0.06 | 0.4 | 0.06 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 3/1/09 | 3/31/09 | 003 | BOD5 | 0.013 | 0.4 | 0.013 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 2/1/09 | 2/28/09 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 1/1/09 | 1/31/09 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | | M | A |
| 12/1/08 | 12/31/08 | 003 | BOD5 | 0.07 | 0.4 | 0.07 | 0.6 | KG/D | | ***** | 5 | 24 | 5 | 36 | MGL | 0 | M | A |
| 11/1/08 | 11/30/08 | 003 | BOD5 | 0.06 | 0.4 | 0.06 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 10/1/08 | 10/31/08 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 9/1/08 | 9/30/08 | 003 | BOD5 | 0.011 | 0.4 | 0.011 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 8/1/08 | 8/31/08 | 003 | BOD5 | 0.034 | 0.4 | 0.034 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 7/1/08 | 7/31/08 | 003 | BOD5 | 0.006 | 0.4 | 0.006 | 0.6 | KG/D | | ***** | 5 | 24 | 5 | 36 | MGL | 0 | M | A |
| 6/1/08 | 6/30/08 | 003 | BOD5 | 0.02 | 0.4 | 0.02 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 5/1/08 | 5/31/08 | 003 | BOD5 | 0.02 | 0.4 | 0.02 | 0.6 | KG/D | | ***** | 4 | 24 | 4 | 36 | MGL | 0 | M | A |
| 4/1/08 | 4/30/08 | 003 | BOD5 | 0.07 | 0.4 | 0.07 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 3/1/08 | 3/31/08 | 003 | BOD5 | 0.045 | 0.4 | 0.045 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 2/1/08 | 2/29/08 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 1/1/08 | 1/31/08 | 003 | BOD5 | 0.07 | 0.4 | 0.07 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 12/1/07 | 12/31/07 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 11/1/07 | 11/30/07 | 003 | BOD5 | 0.07 | 0.4 | 0.07 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 10/1/07 | 10/31/07 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 9/1/07 | 9/30/07 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 8/1/07 | 8/31/07 | 003 | BOD5 | 0.07 | 0.4 | 0.07 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 7/1/07 | 7/31/07 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 6/1/07 | 6/30/07 | 003 | BOD5 | 0.02 | 0.4 | 0.02 | 0.6 | KG/D | | ***** | 5 | 24 | 5 | 36 | MGL | 0 | M | A |
| 5/1/07 | 5/31/07 | 003 | BOD5 | 0.09 | 0.4 | 0.09 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 4/1/07 | 4/30/07 | 003 | BOD5 | 0.03 | 0.4 | 0.03 | 0.6 | KG/D | | ***** | 5 | 24 | 5 | 36 | MGL | 0 | M | A |
| 3/1/07 | 3/31/07 | 003 | BOD5 | 0.06 | 0.4 | 0.06 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 2/1/07 | 2/28/07 | 003 | BOD5 | 0.07 | 0.4 | 0.07 | 0.6 | KG/D | | ***** | 8 | 24 | 8 | 36 | MGL | 0 | M | A |
| 1/1/07 | 1/31/07 | 003 | BOD5 | 0.05 | 0.4 | 0.05 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 12/1/06 | 12/31/06 | 003 | BOD5 | 0.06 | 0.4 | 0.06 | 0.6 | KG/D | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 11/1/06 | 11/30/06 | 003 | BOD5 | 0.03 | 0.4 | 0.03 | 0.6 | KG/D | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 10/1/06 | 10/31/06 | 003 | BOD5 | 0.06 | 0.4 | 0.06 | 0.6 | KG/D | | ***** | 8.4 | 24 | 8.4 | 36 | MGL | 0 | M | A |

| Monitor Start Date | | T # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T # | CR DS |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|----------|
| 9/1/06 | 9/30/06 | 003 | BOD5 | .03 | 0.4 | .03 | 0.6 | KGD | | ***** | 5 | 24 | 5 | 36 | MGL | 0 | M | A |
| 8/1/06 | 8/31/06 | 003 | BOD5 | .03 | 0.4 | .03 | 0.6 | KGD | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 7/1/06 | 7/31/06 | 003 | BOD5 | | 0.4 | | 0.6 | KGD | | ***** | | 24 | | 36 | MGL | | M | A |
| 6/1/06 | 6/30/06 | 003 | BOD5 | .028 | 0.4 | .028 | 0.6 | KGD | | ***** | 5 | 24 | 5 | 36 | MGL | 0 | M | A |
| 5/1/06 | 5/31/06 | 003 | BOD5 | .05 | 0.4 | .05 | 0.6 | KGD | | ***** | 6 | 24 | 6 | 36 | MGL | 0 | M | A |
| 4/1/06 | 4/30/06 | 003 | BOD5 | .06 | 0.4 | .06 | 0.6 | KGD | | ***** | 7 | 24 | 7 | 36 | MGL | 0 | M | A |
| 3/1/06 | 3/31/06 | 003 | BOD5 | .04 | 0.4 | .04 | 0.6 | | | ***** | 6 | 24 | 6 | 36 | | 0 | M | A |
| 2/1/06 | 2/28/06 | 003 | BOD5 | .02 | 0.4 | .02 | 0.6 | | | ***** | 5 | 24 | 5 | 36 | | 0 | M | A |
| 1/1/06 | 1/31/06 | 003 | BOD5 | .05 | 0.4 | .05 | 0.6 | | | ***** | 6 | 24 | 6 | 36 | | 0 | M | A |
| 12/1/05 | 12/31/05 | 003 | BOD5 | .05 | 0.4 | .05 | 0.6 | | | ***** | 7 | 24 | 7 | 36 | | 0 | M | A |
| 11/1/05 | 11/30/05 | 003 | BOD5 | .04 | 0.4 | .04 | 0.6 | | | ***** | 5 | 24 | 5 | 36 | | 0 | M | A |
| 10/1/05 | 10/31/05 | 003 | BOD5 | .03 | 0.4 | .03 | 0.6 | | | ***** | 6 | 24 | 6 | 36 | | 0 | M | A |
| 9/1/05 | 9/30/05 | 003 | BOD5 | .06 | 0.4 | .06 | 0.6 | | | ***** | 4 | 24 | 4 | 36 | | | M | A |
| 8/1/05 | 8/31/05 | 003 | BOD5 | .04 | 0.4 | .04 | 0.6 | | | ***** | 6 | 24 | 6 | 36 | | | M | A |
| 7/1/05 | 7/31/05 | 003 | BOD5 | .005 | 0.4 | .005 | 0.6 | | | ***** | 5 | 24 | 5 | 36 | | | M | A |
| 6/1/05 | 6/30/05 | 003 | BOD5 | .05 | 0.4 | .05 | 0.6 | | | ***** | 6 | 24 | 6 | 36 | | 0 | M | A |
| 5/1/05 | 5/31/05 | 003 | BOD5 | .06 | 0.4 | .06 | 0.6 | | | ***** | 5 | 24 | 5 | 36 | | | M | A |
| 4/1/05 | 4/30/05 | 003 | BOD5 | .03 | 0.4 | .03 | 0.6 | | | ***** | 5 | 24 | 5 | 36 | | | M | A |
| 3/1/05 | 3/31/05 | 003 | BOD5 | .06 | 0.4 | .06 | 0.6 | | | ***** | 8 | 24 | 8 | 36 | | 0 | M | A |
| 2/1/05 | 2/28/05 | 003 | BOD5 | .07 | 0.4 | .07 | 0.6 | | | ***** | 7 | 24 | 7 | 36 | | 0 | M | A |
| 1/1/05 | 1/31/05 | 003 | BOD5 | .017 | 0.4 | .017 | 0.6 | | | ***** | 9 | 24 | 9 | 36 | | 0 | M | A |
| 12/1/04 | 12/31/04 | 003 | BOD5 | .08 | 0.4 | .08 | 0.6 | | | ***** | 8 | 24 | 8 | 36 | | 0 | M | A |
| 11/1/04 | 11/30/04 | 003 | BOD5 | .06 | 0.4 | .06 | 0.6 | | | ***** | 8 | 24 | 8 | 36 | | 0 | M | A |
| 10/1/04 | 10/31/04 | 003 | BOD5 | .10 | 0.4 | .10 | 0.6 | | | ***** | 11 | 24 | 11 | 36 | | 0 | M | A |
| 9/1/04 | 9/30/04 | 003 | BOD5 | .09 | 0.4 | .09 | 0.6 | | | ***** | 9 | 24 | 9 | 36 | | 0 | M | A |
| 8/1/04 | 8/31/04 | 003 | BOD5 | .03 | 0.4 | .03 | 0.6 | | | ***** | 7 | 24 | 7 | 36 | | 0 | M | A |
| 7/1/04 | 7/31/04 | 003 | BOD5 | .01 | 0.4 | .01 | 0.6 | | | ***** | 4 | 24 | 4 | 36 | | 0 | M | A |
| 6/1/04 | 6/30/04 | 003 | BOD5 | .11 | 0.4 | .11 | 0.6 | | | ***** | 14.8 | 24 | 14.8 | 36 | | 0 | M | H |
| 5/1/04 | 5/31/04 | 003 | BOD5 | .05 | 0.4 | .05 | 0.6 | | | ***** | 8 | 24 | 8 | 36 | | 0 | M | H |
| 4/1/04 | 4/30/04 | 003 | BOD5 | .11 | 0.4 | .11 | 0.6 | | | ***** | 14 | 24 | 14 | 36 | | 0 | M | H |
| 3/1/04 | 3/31/04 | 003 | BOD5 | .08 | 0.4 | .08 | 0.6 | | | ***** | 11 | 24 | 11 | 36 | | 0 | M | H |
| 2/1/04 | 2/29/04 | 003 | BOD5 | .11 | 0.4 | .11 | 0.6 | | | ***** | 10 | 24 | 10 | 36 | | 0 | M | H |
| 1/1/04 | 1/31/04 | 003 | BOD5 | .02 | 0.4 | .02 | 0.6 | | | ***** | 6 | 24 | 6 | 36 | | 0 | M | H |
| 12/1/03 | 12/31/03 | 003 | BOD5 | .17 | 0.4 | .17 | 0.6 | | | ***** | 15 | 24 | 15 | 36 | | 0 | M | H |
| 4/1/09 | 4/30/09 | 004 | TSS | 0.08 | 0.4 | 0.08 | 0.6 | KGD | | ***** | 7.8 | 24 | 7.8 | 36 | MGL | 0 | M | A |
| 3/1/09 | 3/31/09 | 004 | TSS | 0.013 | 0.4 | 0.013 | 0.6 | KGD | | ***** | 6.8 | 24 | 6.8 | 36 | MGL | 0 | M | A |
| 2/1/09 | 2/28/09 | 004 | TSS | 0.05 | 0.4 | 0.05 | 0.6 | KGD | | ***** | 7.2 | 24 | 7.2 | 36 | MGL | 0 | M | A |
| 1/1/09 | 1/31/09 | 004 | TSS | 0.05 | 0.4 | 0.05 | 0.6 | KGD | | ***** | 6.8 | 24 | 6.8 | 36 | MGL | | M | A |
| 12/1/08 | 12/31/08 | 004 | TSS | 0.10 | 0.4 | 0.10 | 0.6 | KGD | | ***** | 7.3 | 24 | 7.3 | 36 | MGL | 0 | M | A |
| 11/1/08 | 11/30/08 | 004 | TSS | 0.06 | 0.4 | 0.06 | 0.6 | KGD | | ***** | 6.1 | 24 | 6.1 | 36 | MGL | 0 | M | A |
| 10/1/08 | 10/31/08 | 004 | TSS | 0.07 | 0.4 | 0.07 | 0.6 | KGD | | ***** | 7.5 | 24 | 7.5 | 36 | MGL | 0 | M | A |

| Monitor Start Date | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | QTY Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | TI S |
|-----------------------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|---------|
| 9/7/08 | 004 | TSS | 0.010 | 0.4 | 0.010 | 0.6 | KGD | | ***** | 5.3 | 24 | 5.3 | 36 | MGL | 0 | M A |
| 8/1/08 | 004 | TSS | 0.048 | 0.4 | 0.048 | 0.6 | KGD | | ***** | 8.4 | 24 | 8.4 | 36 | MGL | 0 | M A |
| 7/1/08 | 004 | TSS | 0.009 | 0.4 | 0.009 | 0.6 | KGD | | ***** | 8.2 | 24 | 8.2 | 36 | MGL | 0 | M A |
| 6/1/08 | 004 | TSS | 0.03 | 0.4 | 0.03 | 0.6 | KGD | | ***** | 8.8 | 24 | 8.8 | 36 | MGL | 0 | M A |
| 5/1/08 | 004 | TSS | 0.03 | 0.4 | 0.03 | 0.6 | KGD | | ***** | 5.8 | 24 | 5.8 | 36 | MGL | 0 | M A |
| 4/1/08 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | KGD | | ***** | 3.4 | 24 | 3.4 | 36 | MGL | 0 | M A |
| 3/1/08 | 004 | TSS | 0.044 | 0.4 | 0.044 | 0.6 | KGD | | ***** | 5.8 | 24 | 5.8 | 36 | MGL | 0 | M A |
| 2/1/08 | 004 | TSS | 0.03 | 0.4 | 0.03 | 0.6 | KGD | | ***** | 4.2 | 24 | 4.2 | 36 | MGL | 0 | M A |
| 1/1/08 | 004 | TSS | 0.07 | 0.4 | 0.07 | 0.6 | KGD | | ***** | 7.2 | 24 | 7.2 | 36 | MGL | 0 | M A |
| 12/1/07 | 004 | TSS | 0.06 | 0.4 | 0.06 | 0.6 | KGD | | ***** | 8.4 | 24 | 8.4 | 36 | MGL | 0 | M A |
| 11/1/07 | 004 | TSS | 0.07 | 0.4 | 0.07 | 0.6 | KGD | | ***** | 7.0 | 24 | 7.0 | 36 | MGL | 0 | M A |
| 10/1/07 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | KGD | | ***** | 6.6 | 24 | 6.6 | 36 | MGL | 0 | M A |
| 9/1/07 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | KGD | | ***** | 6.1 | 24 | 6.1 | 36 | MGL | 0 | M A |
| 8/1/07 | 004 | TSS | 0.05 | 0.4 | 0.05 | 0.6 | KGD | | ***** | 4.3 | 24 | 4.3 | 36 | MGL | 0 | M A |
| 7/1/07 | 004 | TSS | 0.02 | 0.4 | 0.02 | 0.6 | KGD | | ***** | 2.4 | 24 | 2.4 | 36 | MGL | 0 | M A |
| 6/1/07 | 004 | TSS | 0.02 | 0.4 | 0.02 | 0.6 | KGD | | ***** | 6.2 | 24 | 6.2 | 36 | MGL | 0 | M A |
| 5/1/07 | 004 | TSS | 0.08 | 0.4 | 0.08 | 0.6 | KGD | | ***** | 5.8 | 24 | 5.8 | 36 | MGL | 0 | M A |
| 4/1/07 | 004 | TSS | 0.02 | 0.4 | 0.02 | 0.6 | KGD | | ***** | 4.1 | 24 | 4.1 | 36 | MGL | 0 | M A |
| 3/1/07 | 004 | TSS | 0.08 | 0.4 | 0.08 | 0.6 | KGD | | ***** | 7.5 | 24 | 7.5 | 36 | MGL | 0 | M A |
| 2/1/07 | 004 | TSS | 0.07 | 0.4 | 0.07 | 0.6 | KGD | | ***** | 8.2 | 24 | 8.2 | 36 | MGL | 0 | M A |
| 1/1/07 | 004 | TSS | 0.05 | 0.4 | 0.05 | 0.6 | KGD | | ***** | 6.8 | 24 | 6.8 | 36 | MGL | 0 | M A |
| 12/1/06 | 004 | TSS | 0.05 | 0.4 | 0.05 | 0.6 | KGD | | ***** | 5.3 | 24 | 5.3 | 36 | MGL | 0 | M A |
| 11/1/06 | 004 | TSS | 0.03 | 0.4 | 0.03 | 0.6 | KGD | | ***** | 6.5 | 24 | 6.5 | 36 | MGL | 0 | M A |
| 10/1/06 | 004 | TSS | 0.02 | 0.4 | 0.02 | 0.6 | KGD | | ***** | 3.7 | 24 | 3.7 | 36 | MGL | 0 | M A |
| 9/1/06 | 004 | TSS | 0.03 | 0.4 | 0.03 | 0.6 | KGD | | ***** | 5.8 | 24 | 5.8 | 36 | MGL | 0 | M A |
| 8/1/06 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | KGD | | ***** | 7.1 | 24 | 7.1 | 36 | MGL | 0 | M A |
| 7/1/06 | 004 | TSS | | 0.4 | | 0.6 | KGD | | ***** | | 24 | | 36 | MGL | | M A |
| 6/1/06 | 004 | TSS | 0.025 | 0.4 | 0.025 | 0.6 | KGD | | ***** | 4.4 | 24 | 4.4 | 36 | MGL | 0 | M A |
| 5/1/06 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | KGD | | ***** | 5.1 | 24 | 5.1 | 36 | MGL | 0 | M A |
| 4/1/06 | 004 | TSS | 0.07 | 0.4 | 0.07 | 0.6 | KGD | | ***** | 7.7 | 24 | 7.7 | 36 | MGL | 0 | M A |
| 3/1/06 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | | | ***** | 6.1 | 24 | 6.1 | 36 | | 0 | M A |
| 2/1/06 | 004 | TSS | 0.02 | 0.4 | 0.02 | 0.6 | | | ***** | 5.8 | 24 | 5.8 | 36 | | 0 | M A |
| 1/1/06 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | | | ***** | 5.8 | 24 | 5.8 | 36 | | 0 | M A |
| 12/1/05 | 004 | TSS | 0.03 | 0.4 | 0.03 | 0.6 | | | ***** | 4.9 | 24 | 4.9 | 36 | | 0 | M A |
| 11/1/05 | 004 | TSS | 0.04 | 0.4 | 0.04 | 0.6 | | | ***** | 4.4 | 24 | 4.4 | 36 | | 0 | M A |
| 10/1/05 | 004 | TSS | 0.02 | 0.4 | 0.02 | 0.6 | | | ***** | 4.7 | 24 | 4.7 | 36 | | 0 | M A |
| 9/1/05 | 004 | TSS | 0.09 | 0.4 | 0.09 | 0.6 | | | ***** | 5.8 | 24 | 5.8 | 36 | | | M A |
| 8/1/05 | 004 | TSS | 0.06 | 0.4 | 0.06 | 0.6 | | | ***** | 9.4 | 24 | 9.4 | 36 | | | M A |
| 7/1/05 | 004 | TSS | 0.006 | 0.4 | 0.006 | 0.6 | | | ***** | 6.8 | 24 | 6.8 | 36 | | | M A |
| 6/1/05 | 004 | TSS | 0.06 | 0.4 | 0.06 | 0.6 | | | ***** | 7.1 | 24 | 7.1 | 36 | | 0 | M A |
| 5/1/05 | 004 | TSS | 0.05 | 0.4 | 0.05 | 0.6 | | | ***** | 4.3 | 24 | 4.3 | 36 | | | M A |

| Monitor Start Date | | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T S | Comments |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|----------|
| 4/1/05 | 4/30/05 | 004 | TSS | .06 | 0.4 | .06 | 0.6 | | ***** | ***** | 8.4 | 24 | 8.4 | 36 | | | | M A |
| 3/1/05 | 3/31/05 | 004 | TSS | .06 | 0.4 | .06 | 0.6 | | ***** | ***** | 7.9 | 24 | 7.9 | 36 | | 0 | | M A |
| 2/1/05 | 2/28/05 | 004 | TSS | .07 | 0.4 | .07 | 0.6 | | ***** | ***** | 7.6 | 24 | 7.6 | 36 | | 0 | | M A |
| 1/1/05 | 1/31/05 | 004 | TSS | .017 | 0.4 | .017 | 0.6 | | ***** | ***** | 9.3 | 24 | 9.3 | 36 | | 0 | | M A |
| 12/1/04 | 12/31/04 | 004 | TSS | .08 | 0.4 | .08 | 0.6 | | ***** | ***** | 8.9 | 24 | 8.9 | 36 | | 0 | | M A |
| 11/1/04 | 11/30/04 | 004 | TSS | .07 | 0.4 | .07 | 0.6 | | ***** | ***** | 9.2 | 24 | 9.2 | 36 | | 0 | | M A |
| 10/1/04 | 10/31/04 | 004 | TSS | .07 | 0.4 | .07 | 0.6 | | ***** | ***** | 8.5 | 24 | 8.5 | 36 | | 0 | | M A |
| 9/1/04 | 9/30/04 | 004 | TSS | .06 | 0.4 | .06 | 0.6 | | ***** | ***** | 6.2 | 24 | 6.2 | 36 | | 0 | | M A |
| 8/1/04 | 8/31/04 | 004 | TSS | .04 | 0.4 | .04 | 0.6 | | ***** | ***** | 11.6 | 24 | 11.6 | 36 | | 0 | | M A |
| 7/1/04 | 7/31/04 | 004 | TSS | .03 | 0.4 | .03 | 0.6 | | ***** | ***** | 8.3 | 24 | 8.3 | 36 | | 0 | | M A |
| 6/1/04 | 6/30/04 | 004 | TSS | .08 | 0.4 | .08 | 0.6 | | ***** | ***** | 9.9 | 24.0 | 9.9 | 36.0 | | 0 | | M H |
| 5/1/04 | 5/31/04 | 004 | TSS | .06 | 0.4 | .06 | 0.6 | | ***** | ***** | 8.4 | 24.0 | 8.4 | 36.0 | | 0 | | M H |
| 4/1/04 | 4/30/04 | 004 | TSS | .06 | 0.4 | .06 | 0.6 | | ***** | ***** | 8.4 | 24.0 | 8.4 | 36.0 | | 0 | | M H |
| 3/1/04 | 3/31/04 | 004 | TSS | .07 | 0.4 | .07 | 0.6 | | ***** | ***** | 8.8 | 24.0 | 8.8 | 36.0 | | 0 | | M H |
| 2/1/04 | 2/29/04 | 004 | TSS | .10 | 0.4 | .10 | 0.6 | | ***** | ***** | 9.7 | 24.0 | 9.7 | 36.0 | | 0 | | M H |
| 1/1/04 | 1/31/04 | 004 | TSS | .03 | 0.4 | .03 | 0.6 | | ***** | ***** | 9.1 | 24.0 | 9.1 | 36.0 | | 0 | | M H |
| 12/1/03 | 12/31/03 | 004 | TSS | .11 | 0.4 | .11 | 0.6 | | ***** | ***** | 9.3 | 24.0 | 9.3 | 36.0 | | 0 | | M H |
| 4/1/09 | 4/30/09 | 007 | DO | | ***** | | ***** | | 8.8 | 6.0 | | | | | MGL | 0 | | M A |
| 3/1/09 | 3/31/09 | 007 | DO | | ***** | | ***** | | 9.4 | 6.0 | | | | | MGL | 0 | | M A |
| 2/1/09 | 2/28/09 | 007 | DO | | ***** | | ***** | | 9.7 | 6.0 | | | | | MGL | 0 | | M A |
| 1/1/09 | 1/31/09 | 007 | DO | | ***** | | ***** | | 9.6 | 6.0 | | | | | MGL | | | M A |
| 12/1/08 | 12/31/08 | 007 | DO | | ***** | | ***** | | 10.2 | 6.0 | | | | | MGL | 0 | | M A |
| 11/1/08 | 11/30/08 | 007 | DO | | ***** | | ***** | | 9.3 | 6.0 | | | | | MGL | 0 | | M A |
| 10/1/08 | 10/31/08 | 007 | DO | | ***** | | ***** | | 7.1 | 6.0 | | | | | MGL | 0 | | M A |
| 9/1/08 | 9/30/08 | 007 | DO | | ***** | | ***** | | 7.7 | 6.0 | | | | | MGL | 0 | | M A |
| 8/1/08 | 8/31/08 | 007 | DO | | ***** | | ***** | | 7.3 | 6.0 | | | | | MGL | 0 | | M A |
| 7/1/08 | 7/31/08 | 007 | DO | | ***** | | ***** | | 8.5 | 6.0 | | | | | MGL | 0 | | M A |
| 6/1/08 | 6/30/08 | 007 | DO | | ***** | | ***** | | 7.9 | 6.0 | | | | | MGL | 0 | | M A |
| 5/1/08 | 5/31/08 | 007 | DO | | ***** | | ***** | | 8.3 | 6.0 | | | | | MGL | 0 | | M A |
| 4/1/08 | 4/30/08 | 007 | DO | | ***** | | ***** | | 7.3 | 6.0 | | | | | MGL | 0 | | M A |
| 3/1/08 | 3/31/08 | 007 | DO | | ***** | | ***** | | 8.1 | 6.0 | | | | | MGL | 0 | | M A |
| 2/1/08 | 2/29/08 | 007 | DO | | ***** | | ***** | | 8.8 | 6.0 | | | | | MGL | 0 | | M A |
| 1/1/08 | 1/31/08 | 007 | DO | | ***** | | ***** | | 8.2 | 6.0 | | | | | MGL | 0 | | M A |
| 12/1/07 | 12/31/07 | 007 | DO | | ***** | | ***** | | 8.5 | 6.0 | | | | | MGL | 0 | | M A |
| 11/1/07 | 11/30/07 | 007 | DO | | ***** | | ***** | | 8.2 | 6.0 | | | | | MGL | 0 | | M A |
| 10/1/07 | 10/31/07 | 007 | DO | | ***** | | ***** | | 8.2 | 6.0 | | | | | MGL | 0 | | M A |
| 9/1/07 | 9/30/07 | 007 | DO | | ***** | | ***** | | 7.1 | 6.0 | | | | | MGL | 0 | | M A |
| 8/1/07 | 8/31/07 | 007 | DO | | ***** | | ***** | | 7.1 | 6.0 | | | | | MGL | 0 | | M A |
| 7/1/07 | 7/31/07 | 007 | DO | | ***** | | ***** | | 7.2 | 6.0 | | | | | MGL | 0 | | M A |
| 6/1/07 | 6/30/07 | 007 | DO | | ***** | | ***** | | 7.6 | 6.0 | | | | | MGL | 0 | | M A |
| 5/1/07 | 5/31/07 | 007 | DO | | ***** | | ***** | | 7.6 | 6.0 | | | | | MGL | 0 | | M A |

| Monitor Start Date | | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T S | C S |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|--------|
| 4/1/07 | 4/30/07 | 007 | DO | | ***** | | ***** | | 7.2 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 3/1/07 | 3/31/07 | 007 | DO | | ***** | | ***** | | 7.9 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 2/1/07 | 2/28/07 | 007 | DO | | ***** | | ***** | | 12.0 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 1/1/07 | 1/31/07 | 007 | DO | | ***** | | ***** | | 11.8 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 12/1/06 | 12/31/06 | 007 | DO | | ***** | | ***** | | 11.6 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 11/1/06 | 11/30/06 | 007 | DO | | ***** | | ***** | | 9.2 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 10/1/06 | 10/31/06 | 007 | DO | | ***** | | ***** | | 9.4 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 9/1/06 | 9/30/06 | 007 | DO | | ***** | | ***** | | 7.6 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 8/1/06 | 8/31/06 | 007 | DO | | ***** | | ***** | | 6.9 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 7/1/06 | 7/31/06 | 007 | DO | | ***** | | ***** | | | 6.0 | | ***** | | ***** | MGL | | M | A |
| 6/1/06 | 6/30/06 | 007 | DO | | ***** | | ***** | | 9.0 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 5/1/06 | 5/31/06 | 007 | DO | | ***** | | ***** | | 6.1 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 4/1/06 | 4/30/06 | 007 | DO | | ***** | | ***** | | 6.3 | 6.0 | | ***** | | ***** | MGL | 0 | M | A |
| 3/1/06 | 3/31/06 | 007 | DO | | ***** | | ***** | | 6.4 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 2/1/06 | 2/28/06 | 007 | DO | | ***** | | ***** | | 6.7 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 1/1/06 | 1/31/06 | 007 | DO | | ***** | | ***** | | 6.6 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 12/1/05 | 12/31/05 | 007 | DO | | ***** | | ***** | | 7.8 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 11/1/05 | 11/30/05 | 007 | DO | | ***** | | ***** | | 8.2 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 10/1/05 | 10/31/05 | 007 | DO | | ***** | | ***** | | 7.6 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 9/1/05 | 9/30/05 | 007 | DO | | ***** | | ***** | | 6.7 | 6.0 | | ***** | | ***** | | | M | A |
| 8/1/05 | 8/31/05 | 007 | DO | | ***** | | ***** | | 7.4 | 6.0 | | ***** | | ***** | | | M | A |
| 7/1/05 | 7/31/05 | 007 | DO | | ***** | | ***** | | 6.2 | 6.0 | | ***** | | ***** | | | M | A |
| 6/1/05 | 6/30/05 | 007 | DO | | ***** | | ***** | | 7.0 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 5/1/05 | 5/31/05 | 007 | DO | | ***** | | ***** | | 6.9 | 6.0 | | ***** | | ***** | | | M | A |
| 4/1/05 | 4/30/05 | 007 | DO | | ***** | | ***** | | 9.2 | 6.0 | | ***** | | ***** | | | M | A |
| 3/1/05 | 3/31/05 | 007 | DO | | ***** | | ***** | | 8.8 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 2/1/05 | 2/28/05 | 007 | DO | | ***** | | ***** | | 8.0 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 1/1/05 | 1/31/05 | 007 | DO | | ***** | | ***** | | 8.5 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 12/1/04 | 12/31/04 | 007 | DO | | ***** | | ***** | | 7.9 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 11/1/04 | 11/30/04 | 007 | DO | | ***** | | ***** | | 8.8 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 10/1/04 | 10/31/04 | 007 | DO | | ***** | | ***** | | 8.0 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 9/1/04 | 9/30/04 | 007 | DO | | ***** | | ***** | | 7.2 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 8/1/04 | 8/31/04 | 007 | DO | | ***** | | ***** | | 7.9 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 7/1/04 | 7/31/04 | 007 | DO | | ***** | | ***** | | 7.1 | 6.0 | | ***** | | ***** | | 0 | M | A |
| 6/1/04 | 6/30/04 | 007 | DO | | ***** | | ***** | | 7.2 | 6.0 | | ***** | | ***** | | 0 | M | H |
| 5/1/04 | 5/31/04 | 007 | DO | | ***** | | ***** | | 7.9 | 6.0 | | ***** | | ***** | | 0 | M | H |
| 4/1/04 | 4/30/04 | 007 | DO | | ***** | | ***** | | 8.7 | 6.0 | | ***** | | ***** | | 0 | M | H |
| 3/1/04 | 3/31/04 | 007 | DO | | ***** | | ***** | | 9.4 | 6.0 | | ***** | | ***** | | 0 | M | H |
| 2/1/04 | 2/29/04 | 007 | DO | | ***** | | ***** | | 7.3 | 6.0 | | ***** | | ***** | | 0 | M | H |
| 1/1/04 | 1/31/04 | 007 | DO | | ***** | | ***** | | 6.7 | 6.0 | | ***** | | ***** | | 0 | M | H |
| 12/1/03 | 12/31/03 | 007 | DO | | ***** | | ***** | | 9.3 | 6.0 | | ***** | | ***** | | 0 | M | H |

| Monitor Start Date | | T # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T # | Obs |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|-----|
| 4/1/09 | 4/30/09 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.2 | 6.6 | 4.2 | 6.6 | MGL | 0 | M | A |
| 3/1/09 | 3/31/09 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2.1 | 6.6 | 2.1 | 6.6 | MGL | 0 | M | A |
| 2/1/09 | 2/28/09 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.4 | 6.6 | 4.4 | 6.6 | MGL | 0 | M | A |
| 1/1/09 | 1/31/09 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5.2 | 6.6 | 5.2 | 6.6 | MGL | | M | A |
| 12/1/08 | 12/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2.8 | 6.6 | 2.8 | 6.6 | MGL | 0 | M | A |
| 11/1/08 | 11/30/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.6 | 6.6 | 1.6 | 6.6 | MGL | 0 | M | A |
| 10/1/08 | 10/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2.6 | 6.6 | 2.6 | 6.6 | MGL | 0 | M | A |
| 9/1/08 | 9/30/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.3 | 6.6 | 1.3 | 6.6 | MGL | 0 | M | A |
| 8/1/08 | 8/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.1 | 6.6 | 1.1 | 6.6 | MGL | 0 | M | A |
| 7/1/08 | 7/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.1 | 6.6 | 1.1 | 6.6 | MGL | 0 | M | A |
| 6/1/08 | 6/30/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.2 | 6.6 | 1.2 | 6.6 | MGL | 0 | M | A |
| 5/1/08 | 5/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 3.0 | 6.6 | 3.0 | 6.6 | MGL | 0 | M | A |
| 4/1/08 | 4/30/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 3.1 | 6.6 | 3.1 | 6.6 | MGL | 0 | M | A |
| 3/1/08 | 3/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5.8 | 6.6 | 5.8 | 6.6 | MGL | 0 | M | A |
| 2/1/08 | 2/29/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 3.1 | 6.6 | 3.1 | 6.6 | MGL | 0 | M | A |
| 1/1/08 | 1/31/08 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.2 | 6.6 | 4.2 | 6.6 | MGL | 0 | M | A |
| 12/1/07 | 12/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5.0 | 6.6 | 5.0 | 6.6 | MGL | 0 | M | A |
| 11/1/07 | 11/30/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.8 | 6.6 | 4.8 | 6.6 | MGL | 0 | M | A |
| 10/1/07 | 10/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.0 | 6.6 | 1.0 | 6.6 | MGL | 0 | M | A |
| 9/1/07 | 9/30/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.6 | 6.6 | 1.6 | 6.6 | MGL | 0 | M | A |
| 8/1/07 | 8/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5.2 | 6.6 | 5.2 | 6.6 | MGL | 0 | M | A |
| 7/1/07 | 7/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.0 | 6.6 | 4.0 | 6.6 | MGL | 0 | M | A |
| 6/1/07 | 6/30/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2.9 | 6.6 | 2.9 | 6.6 | MGL | 0 | M | A |
| 5/1/07 | 5/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.8 | 6.6 | 4.8 | 6.6 | MGL | 0 | M | A |
| 4/1/07 | 4/30/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 3.7 | 6.6 | 3.7 | 6.6 | MGL | 0 | M | A |
| 3/1/07 | 3/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2.1 | 6.6 | 2.1 | 6.6 | MGL | 0 | M | A |
| 2/1/07 | 2/28/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5.0 | 6.6 | 5.0 | 6.6 | MGL | 0 | M | A |
| 1/1/07 | 1/31/07 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.0 | 6.6 | 4.0 | 6.6 | MGL | 0 | M | A |
| 12/1/06 | 12/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.3 | 6.6 | 4.3 | 6.6 | MGL | 0 | M | A |
| 11/1/06 | 11/30/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.2 | 6.6 | 4.2 | 6.6 | MGL | 0 | M | A |
| 10/1/06 | 10/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 4.1 | 6.6 | 4.1 | 6.6 | MGL | 0 | M | A |
| 9/1/06 | 9/30/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 3.7 | 6.6 | 3.7 | 6.6 | MGL | 0 | M | A |
| 8/1/06 | 8/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5.8 | 6.6 | 5.8 | 6.6 | MGL | 0 | M | A |
| 7/1/06 | 7/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 6.6 | 6.6 | | 6.6 | MGL | | M | A |
| 6/1/06 | 6/30/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2 | 6.6 | 2 | 6.6 | MGL | 0 | M | A |
| 5/1/06 | 5/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 1.8 | 6.6 | 1.8 | 6.6 | MGL | 0 | M | A |
| 4/1/06 | 4/30/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 6 | 6.6 | 6 | 6.6 | MGL | 0 | M | A |
| 3/1/06 | 3/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2.6 | 6.6 | 2.6 | 6.6 | | 0 | M | A |
| 2/1/06 | 2/28/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 2 | 6.6 | 2 | 6.6 | | 0 | M | A |
| 1/1/06 | 1/31/06 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 5 | 6.6 | 5 | 6.6 | | 0 | M | A |
| 12/1/05 | 12/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | ***** | | 9 | 6.6 | 9 | 6.6 | | 0 | M | A |

| Monitor Start Date | | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T S | C S |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|--------|
| 11/1/05 | 11/30/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 1.2 | 6.6 | 1.2 | 6.6 | | 0 | M A | |
| 10/1/05 | 10/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 2.0 | 6.6 | 2.0 | 6.6 | | 0 | M A | |
| 9/1/05 | 9/30/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | .8 | 6.6 | .8 | 6.6 | | | M A | |
| 8/1/05 | 8/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 4.5 | 6.6 | 4.5 | 6.6 | | | M A | |
| 7/1/05 | 7/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | .7 | 6.6 | .7 | 6.6 | | | M A | |
| 6/1/05 | 6/30/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 1.5 | 6.6 | 1.5 | 6.6 | | 0 | M A | |
| 5/1/05 | 5/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 1.9 | 6.6 | 1.9 | 6.6 | | | M A | |
| 4/1/05 | 4/30/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 1.2 | 6.6 | 1.2 | 6.6 | | | M A | |
| 3/1/05 | 3/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 5.4 | 6.6 | 5.4 | 6.6 | | 0 | M A | |
| 2/1/05 | 2/28/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 3.6 | 6.6 | 3.6 | 6.6 | | 0 | M A | |
| 1/1/05 | 1/31/05 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 4.8 | 6.6 | 4.8 | 6.6 | | 0 | M A | |
| 12/1/04 | 12/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 4.8 | 6.6 | 4.8 | 6.6 | | 0 | M A | |
| 11/1/04 | 11/30/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 4.9 | 6.6 | 4.9 | 6.6 | | 0 | M A | |
| 10/1/04 | 10/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 3.8 | 6.6 | 3.8 | 6.6 | | 0 | M A | |
| 9/1/04 | 9/30/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 5.2 | 6.6 | 5.2 | 6.6 | | 0 | M A | |
| 8/1/04 | 8/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | .7 | 6.6 | .7 | 6.6 | | 0 | M A | |
| 7/1/04 | 7/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 1.6 | 6.6 | 1.6 | 6.6 | | 0 | M A | |
| 6/1/04 | 6/30/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 5.4 | 6.6 | 5.4 | 6.6 | | 0 | M H | |
| 5/1/04 | 5/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 1.8 | 6.6 | 1.8 | 6.6 | | 0 | M H | |
| 4/1/04 | 4/30/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 4.7 | 6.6 | 4.7 | 6.6 | | 0 | M H | |
| 3/1/04 | 3/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 5.3 | 6.6 | 5.3 | 6.6 | | 0 | M H | |
| 2/1/04 | 2/29/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 18.5 | 6.6 | 18.5 | 6.6 | | 2 | M H | |
| 1/1/04 | 1/31/04 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 7.4 | 6.6 | 7.4 | 6.6 | | 2 | M H | |
| 12/1/03 | 12/31/03 | 039 | AMMONIA, AS N | | ***** | | ***** | | | ***** | 5.2 | 6.6 | 5.2 | 6.6 | | 0 | M H | |
| 4/1/09 | 4/30/09 | 120 | E COLI | | ***** | | ***** | | | ***** | NR | NL | NR | NL | #100M | 0 | M A | |
| 8/1/05 | 8/31/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | | M A | |
| 7/1/05 | 7/31/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | | M A | |
| 6/1/05 | 6/30/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 5/1/05 | 5/31/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | | M A | |
| 4/1/05 | 4/30/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | | M A | |
| 3/1/05 | 3/31/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 2/1/05 | 2/28/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 1/1/05 | 1/31/05 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 12/1/04 | 12/31/04 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 11/1/04 | 11/30/04 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 10/1/04 | 10/31/04 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 9/1/04 | 9/30/04 | 120 | E COLI | | ***** | | ***** | | | ***** | <2 | NL | <2 | NL | | 0 | M A | |
| 8/1/04 | 8/31/04 | 120 | E COLI | | ***** | | ***** | | | ***** | X | NL | X | NL | | | M A | |
| 4/1/09 | 4/30/09 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.9 | 1.0 | | ***** | | ***** | MGCL | 0 | M A | |
| 3/1/09 | 3/31/09 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGCL | 0 | M A | |
| 2/1/09 | 2/28/09 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | MGCL | 0 | M A | |

| Monitor Start Date | 도 # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex # | Comments |
|-----------------------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|---------|----------|
| 1/1/09 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | | M A |
| 12/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 11/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.3 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 10/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 9/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | | M A |
| 8/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 7/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.3 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 6/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.3 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 5/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 4/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 3/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 2/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 1/1/08 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 0.9 | 1.0 | | ***** | | ***** | MGL | 1 | M A |
| 12/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 11/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 10/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.0 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 9/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 8/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.6 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 7/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.0 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 6/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 5/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 4/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 3/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 2/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 1/1/07 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 12/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 11/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 10/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 9/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 8/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 7/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.0 | 1.0 | | ***** | | ***** | MGL | | M A |
| 6/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.9 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 5/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 4/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.3 | 1.0 | | ***** | | ***** | MGL | 0 | M A |
| 3/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | 0 | M A |
| 2/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.6 | 1.0 | | ***** | | ***** | | 0 | M A |
| 1/1/06 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | 0 | M A |
| 12/1/05 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | 0 | M A |
| 11/1/05 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | | 0 | M A |
| 10/1/05 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | | 0 | M A |
| 9/1/05 | 157 | CL2, TOTAL CONTACT | | ***** | | ***** | | 1.8 | 1.0 | | ***** | | ***** | | | M A |

| Monitor Start Date | TO # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T S | CM DS |
|-----------------------|----------|------------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|--------|----------|
| 8/1/05 | 8/31/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 2.2 | 1.0 | | ***** | | ***** | | | | M A |
| 7/1/05 | 7/31/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.5 | 1.0 | | ***** | | ***** | | | | M A |
| 6/1/05 | 6/30/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 2.6 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 5/1/05 | 5/31/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | | | | M A |
| 4/1/05 | 4/30/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | | | M A |
| 3/1/05 | 3/31/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.0 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 2/1/05 | 2/28/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 2.2 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 1/1/05 | 1/31/05 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 12/1/04 | 12/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.0 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 11/1/04 | 11/30/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 10/1/04 | 10/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.9 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 9/1/04 | 9/30/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 2.0 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 8/1/04 | 8/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.2 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 7/1/04 | 7/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 3.8 | 1.0 | | ***** | | ***** | | 0 | | M A |
| 6/1/04 | 6/30/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 5/1/04 | 5/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 4/1/04 | 4/30/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.0 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 3/1/04 | 3/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.1 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 2/1/04 | 2/29/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.4 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 1/1/04 | 1/31/04 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.6 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 12/1/03 | 12/31/03 | 157 CL2. TOTAL CONTACT | | ***** | | ***** | | 1.6 | 1.0 | | ***** | | ***** | | 0 | | M H |
| 4/1/09 | 4/30/09 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 3/1/09 | 3/31/09 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 2/1/09 | 2/28/09 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 1/1/09 | 1/31/09 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 12/1/08 | 12/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 11/1/08 | 11/30/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 10/1/08 | 10/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 9/1/08 | 9/30/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 8/1/08 | 8/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 7/1/08 | 7/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 6/1/08 | 6/30/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 5/1/08 | 5/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 4/1/08 | 4/30/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 3/1/08 | 3/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 2/1/08 | 2/29/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 1/1/08 | 1/31/08 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 12/1/07 | 12/31/07 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 11/1/07 | 11/30/07 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 10/1/07 | 10/31/07 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |
| 9/1/07 | 9/30/07 | 165 CL2. INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | MGL | 0 | | M A |

| Monitor Start Date | | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex | T ID | CH DS |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|----|---------|----------|
| 8/1/07 | 8/3/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 7/1/07 | 7/3/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 6/1/07 | 6/30/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 5/1/07 | 5/31/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 4/1/07 | 4/30/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 3/1/07 | 3/31/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 2/1/07 | 2/28/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 1/1/07 | 1/31/07 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 12/1/06 | 12/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 11/1/06 | 11/30/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 10/1/06 | 10/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 9/1/06 | 9/30/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 8/1/06 | 8/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 7/1/06 | 7/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 6/1/06 | 6/30/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 5/1/06 | 5/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 4/1/06 | 4/30/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | MGL | 0 | M A | |
| 3/1/06 | 3/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 2/1/06 | 2/28/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 1/1/06 | 1/31/06 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 12/1/05 | 12/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 11/1/05 | 11/30/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 10/1/05 | 10/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 9/1/05 | 9/30/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 8/1/05 | 8/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 7/1/05 | 7/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 6/1/05 | 6/30/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 5/1/05 | 5/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 4/1/05 | 4/30/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 3/1/05 | 3/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 2/1/05 | 2/28/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 1/1/05 | 1/31/05 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 12/1/04 | 12/31/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 11/1/04 | 11/30/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 10/1/04 | 10/31/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 9/1/04 | 9/30/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 8/1/04 | 8/31/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 7/1/04 | 7/31/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M A | |
| 6/1/04 | 6/30/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M H | |
| 5/1/04 | 5/31/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M H | |
| 4/1/04 | 4/30/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | ***** | <QL | 0.008 | <QL | 0.01 | | 0 | M H | |

| Monitor Start Date | P # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex # | CLS |
|-----------------------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|---------|-----|
| 3/1/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | | 0 | M H |
| 2/1/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | | 0 | M H |
| 1/1/04 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | | 0 | M H |
| 12/1/03 | 165 | CL2, INST RES MAX | | ***** | | ***** | | | | <QL | 0.008 | <QL | 0.01 | | 0 | M H |
| 4/1/09 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.9 | 0.6 | | | | | MGL | 0 | M A |
| 3/1/09 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 2/1/09 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | | | | MGL | 0 | M A |
| 1/1/09 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 12/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 11/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.3 | 0.6 | | | | | MGL | 0 | M A |
| 10/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 9/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 8/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 7/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.3 | 0.6 | | | | | MGL | 0 | M A |
| 6/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.3 | 0.6 | | | | | MGL | 0 | M A |
| 5/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 4/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 3/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | | | | MGL | 0 | M A |
| 2/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 1/1/08 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 0.9 | 0.6 | | | | | MGL | 0 | M A |
| 12/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | | | | MGL | 0 | M A |
| 11/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 10/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.0 | 0.6 | | | | | MGL | 0 | M A |
| 9/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 8/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.6 | 0.6 | | | | | MGL | 0 | M A |
| 7/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.0 | 0.6 | | | | | MGL | 0 | M A |
| 6/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 5/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 4/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 3/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 2/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 1/1/07 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 12/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 11/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | | | | MGL | 0 | M A |
| 10/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 9/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | | | | MGL | 0 | M A |
| 8/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 7/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | | 0.6 | | | | | MGL | 0 | M A |
| 6/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.9 | 0.6 | | | | | MGL | 0 | M A |
| 5/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | | | | MGL | 0 | M A |
| 4/1/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.3 | 0.6 | | | | | MGL | 0 | M A |

| Monitor Start Date | | D # | Parameter Description | QTY AVG | Lim Avg | QTY MAX | Lim Max | Qty Unit | CONC MIN | Lim Min | CONC AVG | Lim Avg | CONC MAX | Lim Max | Conc Unit | Ex T | Obs |
|-----------------------|----------|--------|-----------------------|------------|---------|------------|---------|-------------|-------------|---------|-------------|---------|-------------|---------|--------------|---------|-----|
| 3/1/06 | 3/31/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | 0 | M A |
| 2/1/06 | 2/28/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.6 | 0.6 | | ***** | | ***** | | 0 | M A |
| 1/1/06 | 1/31/06 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | 0 | M A |
| 12/1/05 | 12/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | 0 | M A |
| 11/1/05 | 11/30/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | ***** | | ***** | | 0 | M A |
| 10/1/05 | 10/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | ***** | | ***** | | 0 | M A |
| 9/1/05 | 9/30/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.8 | 0.6 | | ***** | | ***** | | | M A |
| 8/1/05 | 8/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 2.2 | 0.6 | | ***** | | ***** | | | M A |
| 7/1/05 | 7/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.5 | 0.6 | | ***** | | ***** | | | M A |
| 6/1/05 | 6/30/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 2.6 | 0.6 | | ***** | | ***** | | 0 | M A |
| 5/1/05 | 5/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | ***** | | ***** | | | M A |
| 4/1/05 | 4/30/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | | M A |
| 3/1/05 | 3/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.0 | 0.6 | | ***** | | ***** | | 0 | M A |
| 2/1/05 | 2/28/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 2.2 | 0.6 | | ***** | | ***** | | 0 | M A |
| 1/1/05 | 1/31/05 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | 0 | M A |
| 12/1/04 | 12/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.0 | 0.6 | | ***** | | ***** | | 0 | M A |
| 11/1/04 | 11/30/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | ***** | | ***** | | 0 | M A |
| 10/1/04 | 10/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.9 | 0.6 | | ***** | | ***** | | 0 | M A |
| 9/1/04 | 9/30/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 2.0 | 0.6 | | ***** | | ***** | | 0 | M A |
| 8/1/04 | 8/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.2 | 0.6 | | ***** | | ***** | | 0 | M A |
| 7/1/04 | 7/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 3.8 | 0.6 | | ***** | | ***** | | 0 | M A |
| 6/1/04 | 6/30/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | ***** | | ***** | | 0 | M H |
| 5/1/04 | 5/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | 0 | M H |
| 4/1/04 | 4/30/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.0 | 0.6 | | ***** | | ***** | | 0 | M H |
| 3/1/04 | 3/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.1 | 0.6 | | ***** | | ***** | | 0 | M H |
| 2/1/04 | 2/29/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.4 | 0.6 | | ***** | | ***** | | 0 | M H |
| 1/1/04 | 1/31/04 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.6 | 0.6 | | ***** | | ***** | | 0 | M H |
| 12/1/03 | 12/31/03 | 213 | CL2, INST TECH MIN | | ***** | | ***** | | 1.6 | 0.6 | | ***** | | ***** | | 0 | M H |

6/23/2009 2:02:03 PM

Facility = Unionville Elementary School
Chemical = Total Residual Chlorine
Chronic averaging period = 4
WLAa = 19
WLAc = 11
Q.L. = 100
samples/mo. = 30
samples/wk. = 8

Summary of Statistics:

observations = 1
Expected Value = 200
Variance = 14400
C.V. = 0.6
97th percentile daily values = 486.683
97th percentile 4 day average = 332.758
97th percentile 30 day average = 241.210
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 16.0883226245855
Average Weekly limit = 9.59676626920107
Average Monthly LImit = 7.9737131838758

The data are:

200

Units of measurement are in ug/L.

Unionville Elementary School
NPDES - SAA

Location: Located on Route 522, approximately .3 mile south of the intersection of Route 522 with S.R. 20

Quads Used: Unionville
Lahore

Critical Discharge: .021 cfs/ sq. mi. (North Anna River Near Doswell)

D.A. of Riga Run above confluence with the receiving tributary - 1.25 sq. mi.

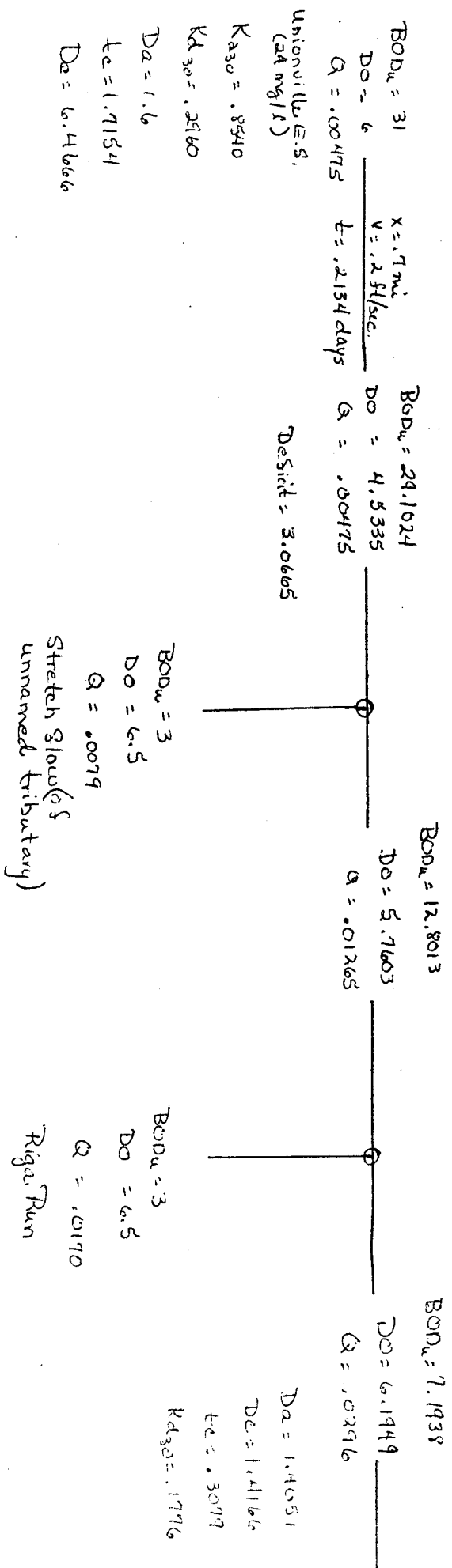
$$\text{Flow} = \frac{1.25 \text{ sq. mi.} \times .021 \text{ cfs/ sq. mi.}}{1.55 \text{ MGD}} = .0169 \text{ MGD}$$

D.A. of receiving waters = .59 sq. mi.

$$\text{Stretch flow} = \frac{.59 \text{ sq. mi.} \times .021 \text{ cfs/sq. mi.}}{1.55 \text{ MGD}} = .0079 \text{ MGD}$$

Unionville Elementary School XPDES - SAA

(1)



$$\begin{array}{rcl}
 x = 1.5257 & BOD_u = 6.8110 & \\
 -y = .3 & D_0 = 6.1834 & \\
 \hline
 t = .3079 & C_1 = .0296 & \\
 & D_c = 1.4166 & \\
 & t_c = \text{mixing point} & \\
 & \text{sketch} &
 \end{array}$$

Stream standards are not with the
present effluent BOD, of 24 mg/L.

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Orange County, Virginia.

PUBLIC COMMENT PERIOD: XXX, 2009 to 5:00 p.m. on XXX, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Orange County School Board, 200 Dailey Drive, Orange, Virginia, 22960, VA0060330

NAME AND ADDRESS OF FACILITY: Unionville Elementary School Wastewater Treatment Plant, 10285 Zachary Taylor Highway, Unionville, Virginia 22567

PROJECT DESCRIPTION: Orange County School Board has applied for a reissuance of a permit for the public Unionville Elementary School Wastewater Treatment Plant. The applicant proposes to release treated sewage wastewaters from residential areas at a rate of 0.0047 million gallons per day into a water body. The sludge will be disposed by transporting it to the Massaponax Wastewater Treatment Plant (VA0025658) in Spotsylvania County, Virginia. The facility proposes to release the treated sewage in the unnamed tributary of Riga Run in Orange County in the York River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, BOD₅, Chlorine, Total Suspended Solids, *E. coli*, Dissolved Oxygen, and Ammonia as N.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment.

Name: Joan C. Crowther

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3925 E-mail: joan.crowther@deq.virginia.gov Fax: (703) 583-3821

**State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Unionville Elementary School Wastewater Treatment Plant
 NPDES Permit Number: VA0060330
 Permit Writer Name: Joan C. Crowther
 Date: June 23, 2009

Major ☐Minor ☒Industrial ☐Municipal ☒**I.A. Draft Permit Package Submittal Includes:**

| | Yes | No | N/A |
|---|-----|----|-----|
| 1. Permit Application? | X | | |
| 2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)? | X | | |
| 3. Copy of Public Notice? | X | | |
| 4. Complete Fact Sheet? | X | | |
| 5. A Priority Pollutant Screening to determine parameters of concern? | | | X |
| 6. A Reasonable Potential analysis showing calculated WQBELs? | X | | |
| 7. Dissolved Oxygen calculations? | X | | |
| 8. Whole Effluent Toxicity Test summary and analysis? | | | X |
| 9. Permit Rating Sheet for new or modified industrial facilities? | | | X |

I.B. Permit/Facility Characteristics

| | Yes | No | N/A |
|---|-----|----|-----|
| 1. Is this a new, or currently unpermitted facility? | | X | |
| 2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit? | X | | |
| 3. Does the fact sheet or permit contain a description of the wastewater treatment process? | X | | |
| 4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit? | X | | |
| 5. Has there been any change in streamflow characteristics since the last permit was developed? | X | | |
| 6. Does the permit allow the discharge of new or increased loadings of any pollutants? | | X | |
| 7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses? | X | | |
| 8. Does the facility discharge to a 303(d) listed water? (Not directly – downstream is TMDL listed) | | X | |
| a. Has a TMDL been developed and approved by EPA for the impaired water? | X | | |
| b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit? | | X | |
| c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water? | X | | |
| 9. Have any limits been removed, or are any limits less stringent, than those in the current permit? | | X | |
| 10. Does the permit authorize discharges of storm water? | | X | |

| | | | |
|---|------------|-----------|------------|
| | | | |
| I.B. Permit/Facility Characteristics – cont. | Yes | No | N/A |
| 11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production? | | X | |
| 12. Are there any production-based, technology-based effluent limits in the permit? | | X | |
| 13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures? | | X | |
| 14. Are any WQBELs based on an interpretation of narrative criteria? | | X | |
| 15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations? | | X | |
| 16. Does the permit contain a compliance schedule for any limit or condition? | | X | |
| 17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)? | | X | |
| 18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated? | | | X |
| 19. Is there any indication that there is significant public interest in the permit action proposed for this facility? | | X | |
| 20. Have previous permit, application, and fact sheet been examined? | X | | |

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs

(To be completed and included in the record only for POTWs)

| II.A. Permit Cover Page/Administration | Yes | No | N/A |
|---|------------|-----------|------------|
| 1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)? | X | | |
| 2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)? | X | | |

| II.B. Effluent Limits – General Elements | Yes | No | N/A |
|--|------------|-----------|------------|
| 1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)? | X | | |
| 2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit? | X | | |

| II.C. Technology-Based Effluent Limits (POTWs) | Yes | No | N/A |
|--|------------|-----------|------------|
| 1. Does the permit contain numeric limits for <u>ALL</u> of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH? | X | | |
| 2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133? | X | | |
| a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved? | | | X |
| 3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)? | X | | |
| 4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits? | X | | |
| 5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)? | | X | |
| a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations? | | | X |

| II.D. Water Quality-Based Effluent Limits | Yes | No | N/A |
|---|------------|-----------|------------|
| 1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality? | X | | |
| 2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL? | X | | |
| 3. Does the fact sheet provide effluent characteristics for each outfall? | X | | |
| 4. Does the fact sheet document that a “reasonable potential” evaluation was performed? | X | | |
| a. If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures? | X | | |
| b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone? | X | | |
| c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”? | X | | |
| d. Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)? | X | | |
| e. Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined? | X | | |

| II.D. Water Quality-Based Effluent Limits – cont. | Yes | No | N/A |
|--|------------|-----------|------------|
| 5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet? | X | | |
| 6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established? | | | X |
| 7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)? | X | | |
| 8. Does the record indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy? | X | | |

| II.E. Monitoring and Reporting Requirements | Yes | No | N/A |
|--|------------|-----------|------------|
| 1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations? | X | | |
| a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver? | | | X |
| 2. Does the permit identify the physical location where monitoring is to be performed for each outfall? | X | | |
| 3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements? | | X | |
| 4. Does the permit require testing for Whole Effluent Toxicity? | | X | |

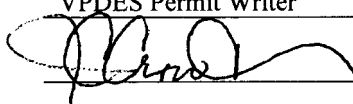
| II.F. Special Conditions | Yes | No | N/A |
|---|------------|-----------|------------|
| 1. Does the permit include appropriate biosolids use/disposal requirements? | X | | |
| 2. Does the permit include appropriate storm water program requirements? | | X | |

| II.F. Special Conditions – cont. | Yes | No | N/A |
|---|------------|-----------|------------|
| 3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements? | | | X |
| 4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations? | | | X |
| 5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]? | | | X |
| 6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)? | | X | |
| a. Does the permit require implementation of the “Nine Minimum Controls”? | | | X |
| b. Does the permit require development and implementation of a “Long Term Control Plan”? | | | X |
| c. Does the permit require monitoring and reporting for CSO events? | | | X |
| 7. Does the permit include appropriate Pretreatment Program requirements? | | | X |

| II.G. Standard Conditions | | | Yes | No | N/A |
|---|-----------------------------|---------------------------|-----|----|-----|
| 1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions? | | | X | | |
| List of Standard Conditions – 40 CFR 122.41 | | | | | |
| Duty to comply | Property rights | Reporting Requirements | | | |
| Duty to reapply | Duty to provide information | Planned change | | | |
| Need to halt or reduce activity not a defense | Inspections and entry | Anticipated noncompliance | | | |
| Duty to mitigate | Monitoring and records | Transfers | | | |
| Proper O & M | Signatory requirement | Monitoring reports | | | |
| Permit actions | Bypass | Compliance schedules | | | |
| | Upset | 24-Hour reporting | | | |
| | | Other non-compliance | | | |
| 2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]? | | | | X | |

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

| | |
|-----------|---|
| Name | <u>Joan C. Crowther</u> |
| Title | <u>VPDES Permit Writer</u> |
| Signature |  <u></u> |
| Date | <u>June 23, 2009</u> |